Dear Families,

Our district's teachers hope that as you prepare for all of your summer adventures that you also don't forget that "**summer slide**" is real. Just like with sports, when students don't continue to practice what they've learned, they start to lose their skills and start to slide backwards. To prevent the "summer slide", we've put together a packet to help your child have a way to keep their skills fresh. Attached is a packet of reading and math activities that will help your child stay fresh throughout the summer.

Hello Summer!

Opportunities to Prevent Summer Slide

Helpful Tip: You'll want to be proactive by scheduling some time a couple days a week when your child should complete a few of reading and math activities to stay up to speed, otherwise it's easy to forget about it.

In addition to this packet, check out the websites that are available on the Flushing Community School website under the "Students" tab. Legends of Learning and Moby Max are great opportunities to extend thinking/learning. There you will also find information about the "Read to A Million" challenge hosted by our GISD. This is a great opportunity to encourage reading over the summer with an incentive for the top readers across the county to earn prizes. Finally, below are some of our top website favorites that don't require a special code or login:

- mel.org - free digital access to library books
- webmathminute.com - digital math fact practice
- studyjams.scholastic.com/studyjams - games
- khanacademy.org - videos, practice & quizzes
- mrnussbaum.com - educational games
- commoncoresheets.com - printable math fluency worksheets
- coolmath.com - games
- timeforkids.com - current event/news articles
- almanac.com/kids - riddles, puzzles, questions of the day, interesting facts, etc.
- howstuffworks.com - inquiry and exploration

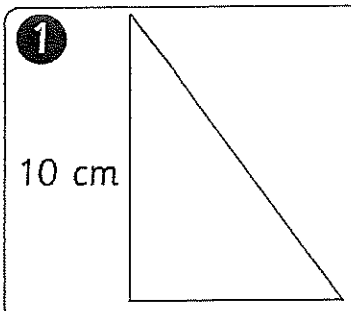
Have a great summer and don't forget to stay engaged!

High Rise

EducationCity

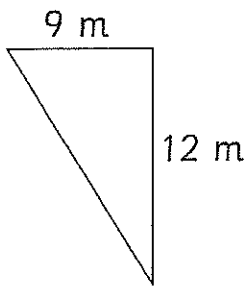
Write the area of the right-angled triangle in the boxes below. You may need a calculator. One has been done for you.

1



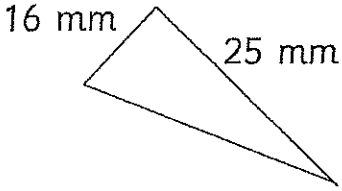
area = 25 cm²

2



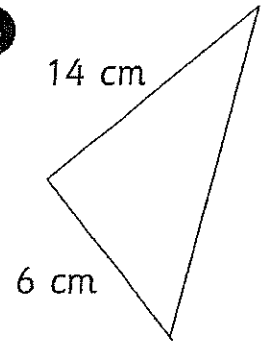
area =

3



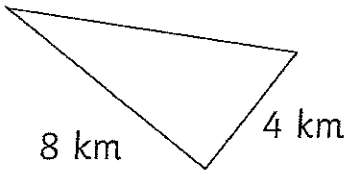
area =

4



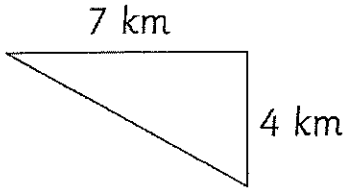
area =

5



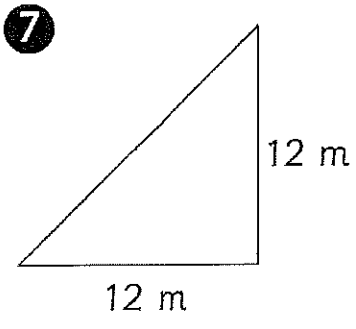
area =

6

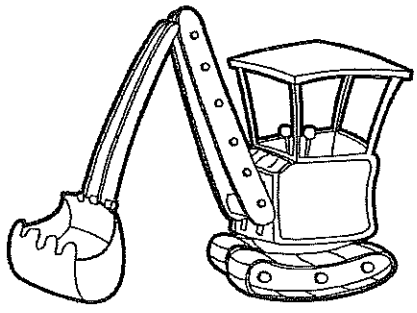


area =

7



area =



Now draw your own right-angled triangle on the back of the sheet. Label the lengths of the base and height. Then ask a friend to calculate the area.

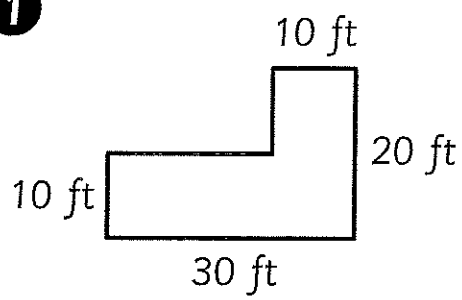
Area of Expertise

Activity Sheet

Name: _____ Class: _____

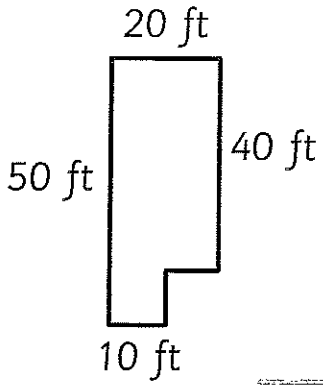
Sten needs to put mulch on the playgrounds.
Help him find the area of each park.

1



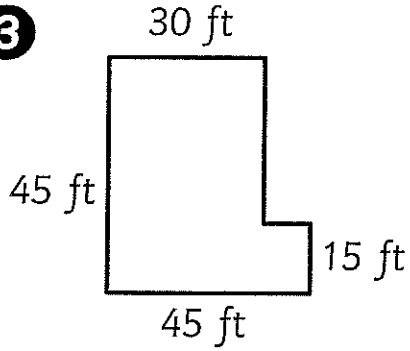
_____ ft^2

2



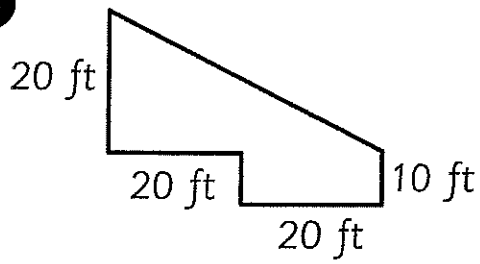
_____ ft^2

3



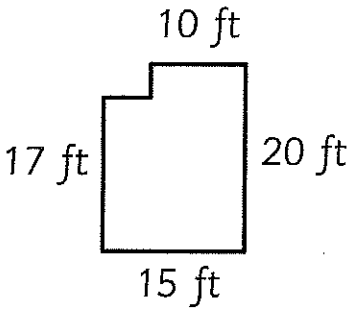
_____ ft^2

4



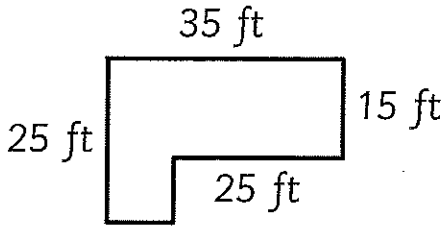
_____ ft^2

5



_____ ft^2

6



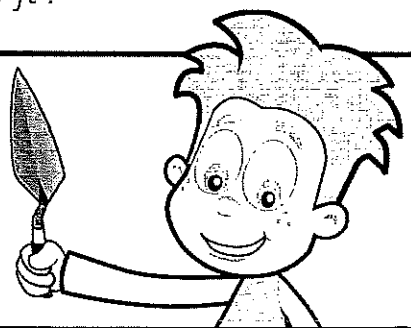
_____ ft^2

To make a soccer field, a park must have an area of over 1,000 ft^2.
Which park above is larger than 1,000 ft^2?

7

_____

_____



Pigeon Race

EducationCity

Stig, Sten, Manu and Klara decided to race their pigeons to see which was the best.
They decided that each pigeon should race three times over different distances.

Race 1. Distance = 80 miles.

1. Stig's pigeon flew 25% of the distance. It flew _____ miles.
2. Manu's pigeon flew 50% of the distance. It flew _____ miles.
3. Sten's pigeon flew 10% of the distance. It flew _____ miles.
4. Klara's pigeon flew 75% of the distance. It flew _____ miles.

Race 2. Distance = 100 miles.

5. Stig's pigeon flew 50% of the distance. It flew _____ miles.
6. Manu's pigeon flew 10% of the distance. It flew _____ miles.
7. Sten's pigeon flew 1% of the distance. It flew _____ miles.
8. Klara's pigeon flew 25% of the distance. It flew _____ miles.

Race 3. Distance = 90 miles.

9. Stig's pigeon flew 5% of the distance. It flew _____ miles.
10. Manu's pigeon flew 25% of the distance. It flew _____ miles.
11. Sten's pigeon flew 50% of the distance. It flew _____ miles.
12. Klara's pigeon flew 10% of the distance. It flew _____ miles.

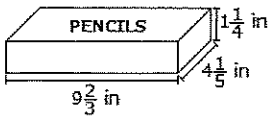
How far did each pigeon fly?
Write the totals in the spaces below, starting with the one that flew the farthest.

ⓐ _____ pigeon came 1st. It flew _____ miles altogether.
ⓑ _____ pigeon came 2nd. It flew _____ miles altogether.
ⓒ _____ pigeon came 3rd. It flew _____ miles altogether.
ⓓ _____ pigeon came 4th. It flew _____ miles altogether.

Study Island 6th Grade Geometry - Volume

Question 1 .

Candice bought a pencil box, shown below, to take with her to school.

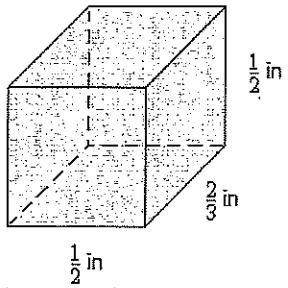


**Picture not drawn to scale*

What is the volume of the pencil box?

- **A.** $40\frac{3}{5}$ cu in
- **B.** $101\frac{1}{2}$ cu in
- **C.** $50\frac{3}{4}$ cu in
- **D.** $15\frac{7}{60}$ cu in

Question 2 .



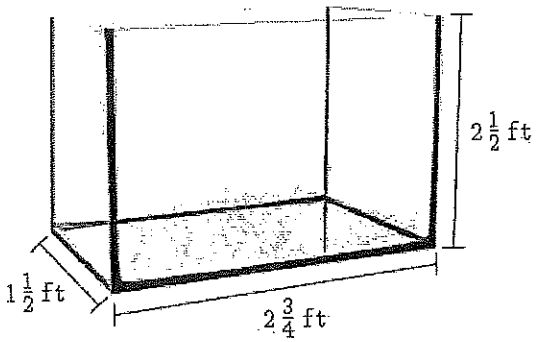
Note: Figure is not drawn to scale.

What is the volume of the rectangular prism?

- **A.** $\frac{2}{3}$ cu in
- **B.** $\frac{1}{2}$ cu in
- **C.** $\frac{1}{6}$ cu in
- **D.** $\frac{1}{3}$ cu in

Question 3 .

Betty purchased a fish tank. The length, width, and height of the fish tank are shown below.



Picture not drawn to scale

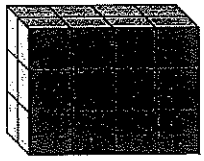
What is the volume of the fish tank?

- ○ **A.** $10\frac{5}{32}$ cu ft
- ○ **B.** $6\frac{3}{4}$ cu ft
- ○ **C.** $10\frac{5}{16}$ cu ft
- ○ **D.** $11\frac{5}{16}$ cu ft

Question 4 .

Directions: Select all the correct answers.

The prism below is made of cubes which measure $\frac{1}{6}$ of a centimeter on one side.



Which of the following represents the volume of the prism?

- ☐ $\frac{1}{216}$ cubic cm $\times$ 24
- ☐ $\left(4 \times \frac{1}{6}\text{cm}\right) + \left(2 \times \frac{1}{6}\text{cm}\right) + \left(3 \times \frac{1}{6}\text{cm}\right)$
- ☐ $\left(4 \times \frac{1}{6}\text{cm}\right) \times \left(2 \times \frac{1}{6}\text{cm}\right) \times \left(3 \times \frac{1}{6}\text{cm}\right)$
- ☐ $\frac{4}{3}$ cubic cm
- ☐ $\frac{3}{2}$ cubic cm
- ☐ $\frac{1}{9}$ cubic cm
- ☐ $\frac{1}{18}$ cubic cm $\times$ 24

Question 5 .

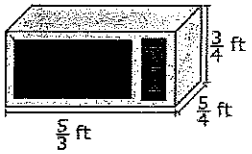
The prism below is made of cubes which measure $\frac{1}{4}$ of a centimeter on one side. What is the volume?

Note: Figure is not drawn to scale.

- A. 5 cubic cm
- B. $\frac{9}{4}$ cubic cm
- C. $\frac{5}{16}$ cubic cm
- D. 20 cubic cm

Question 6 .

Hannah measured the length, width, and height of her microwave in order to determine if it would fit in the space above her stove. Her measurements are shown below.



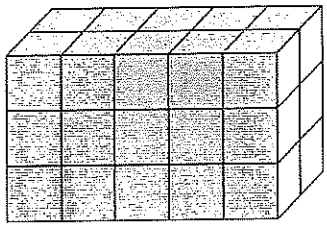
*Picture not drawn to scale

What is the volume of the microwave?

- A. $1\frac{3}{4}$ cu ft
- B. $2\frac{11}{12}$ cu ft
- C. $3\frac{2}{3}$ cu ft
- D. $1\frac{9}{16}$ cu ft

Question 7 .

The prism below is made of cubes which measure $\frac{1}{5}$ of an inch on one side. What is the volume of the prism?

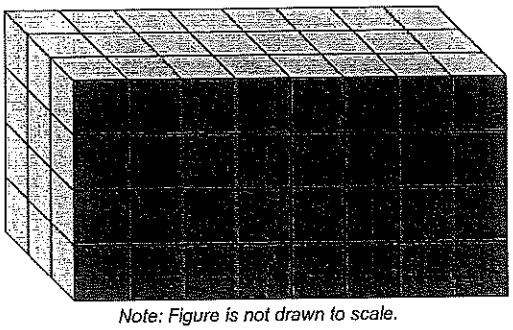


Note: Figure is not drawn to scale.

- A. 3 cu in
- B. $\frac{12}{25}$ cu in
- C. $\frac{25}{6}$ cu in
- D. $\frac{6}{25}$ cu in

Question 8 .

The prism below is made of cubes which measure $\frac{1}{2}$ of a foot on one side. What is the volume of the prism?

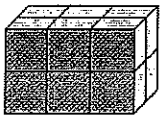


Note: Figure is not drawn to scale.

- A. 16 cu ft
- B. 48 cu ft
- C. 18 cu ft
- D. 12 cu ft

Question 9 .

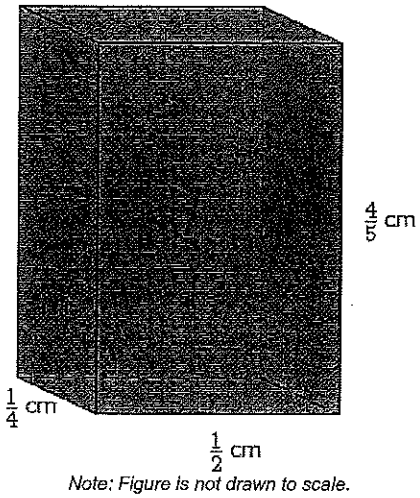
The prism below is made of cubes which measure $\frac{1}{4}$ of an inch on one side. What is the volume?



Note: Figure is not drawn to scale.

- **A.** $\frac{7}{4}$ cubic in
- **B.** 3 cubic in
- **C.** $\frac{3}{16}$ cubic in
- **D.** 12 cubic in

Question 10 .



Note: Figure is not drawn to scale.

What is the volume of the rectangular prism?

- **A.** $\frac{1}{5}$ cu cm
- **B.** $\frac{2}{5}$ cu cm
- **C.** $\frac{1}{8}$ cu cm
- **D.** $\frac{1}{10}$ cu cm

Bumper Bash

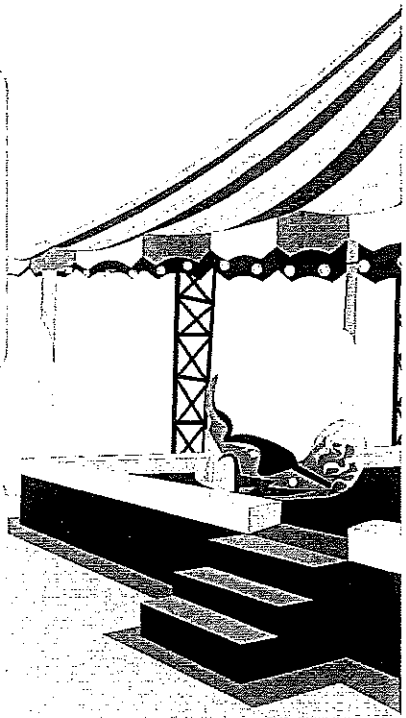
Activity Sheet

Name: _____ Class: _____

Calculate what number each letter represents in these questions.
In the box, explain how you found the answer.

1 $12b = 24$ $b =$ _____

2 $c + 20 = 30$ $c =$ _____



3 $d - 25 = 40$ $d =$ _____

Here is an unusual square.
It is unusual because the numbers in add up to 24 in all directions.
Replace the letters with numbers to make it correct.

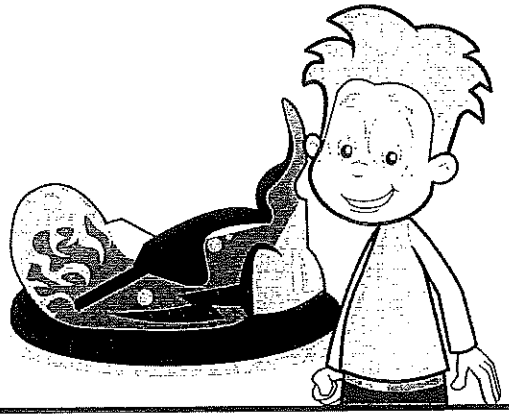
4

7	*a*	5
6	8	*b*
c	4	9

$a =$ _____

$b =$ _____

$c =$ _____



Hockey Stars

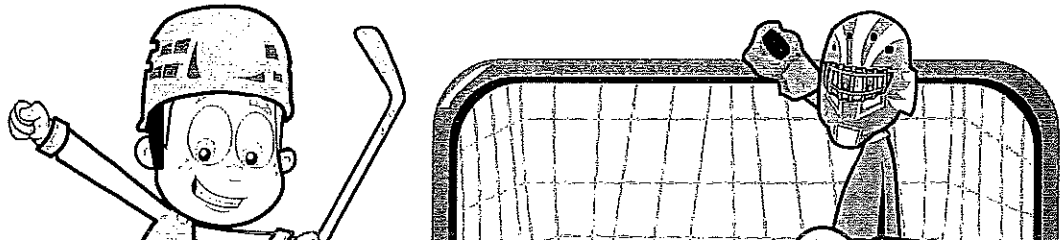
Activity Sheet

Name: _____ Class: _____

Algebra Hockey: A two player game.

- Cut out the cards below and place them face down on a table.
- Take turns picking up two cards.
- If they are equivalent the player scores a goal and keeps the cards.
- If they are not equivalent, and the cards go back on the table.
- The player that scores the most goals wins.

$8n$	$3n + 440$
$5n - 30$	$n + n + n + n$
$6n + 400 - 3n + 40$	$3(n + 10)$
$5n + 40$	$9n - 360$
$3n + 30$	$5n(n - 6)$
$4n$	$n + n + 10 + 5n - 2$
$9(n - 40)$	$5(n + 8)$
$7n + 8$	$20 + 3n - 20 + 5n$
$3n + 12 + n - 3$	$4n + 9$

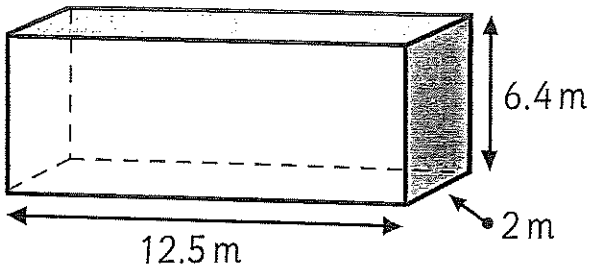


Safety Net
Activity Sheet

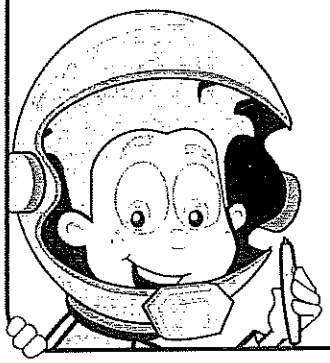
Name: _____ Class: _____

Draw a net for and find the surface area of each 3-D figure.
Show your work.

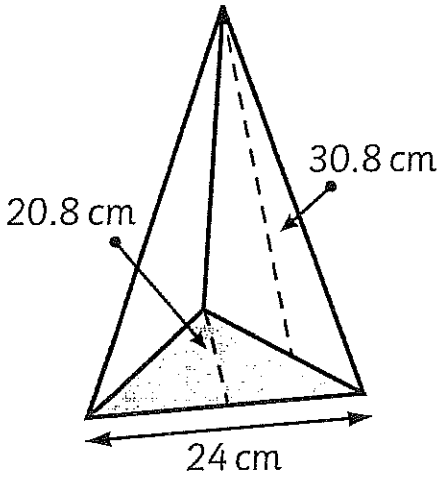
1



rectangular prism



2



triangular pyramid

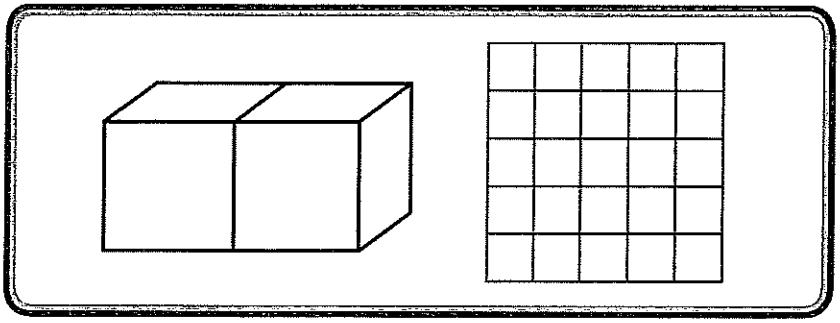
Sten, We Have a Polygon

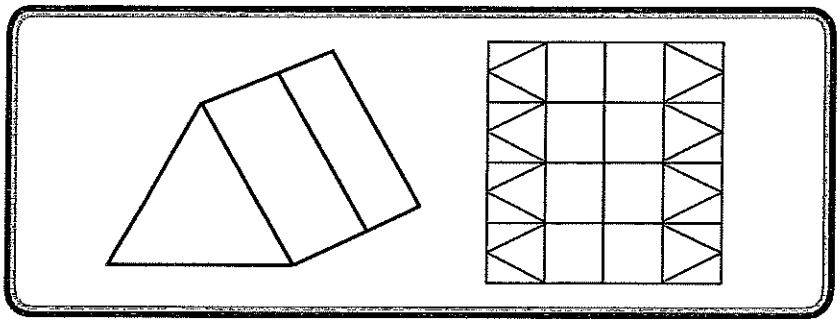
Activity Sheet

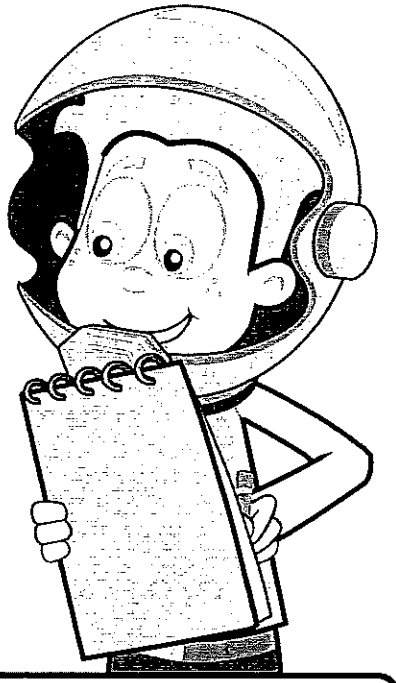
Name: _____ Class: _____

Draw a net for each shape using the grid.

1

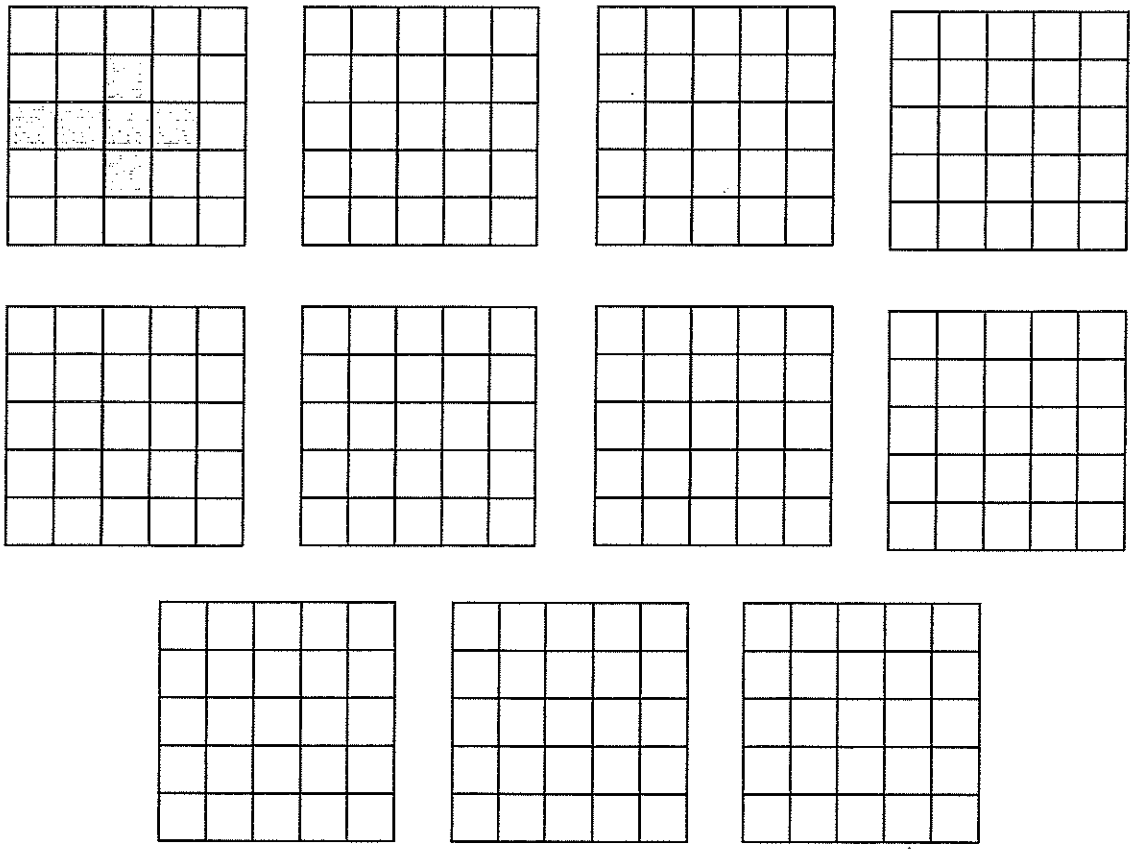






There are 11 different nets that will form a cube.
How many can you make?
Shade in the nets on the grid below.
One has been done for you.

2



Tempo Tantrum

Activity Sheet

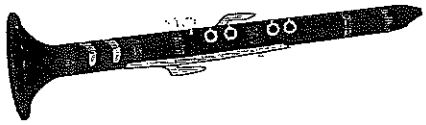
Name: _____ Class: _____

Solve the problems.

1. What is 28% of 50? _____
2. 28% of what number is 21? _____
3. 60% of what number is 36? _____
4. What is 55% of 160? _____
5. 56% of what number is 14? _____
6. What is 35% of 60? _____
7. What is 40% of 130? _____
8. What is 18% of 150? _____
9. 5% of what number is 6? _____
10. 30% of what number is 48? _____
11. What is 60% of 15? _____
12. 32% of what number is 40? _____

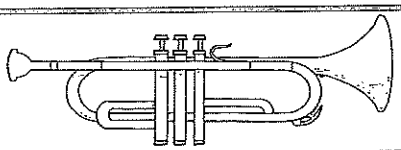
13. There are 120 musicians in the orchestra.
20% of the orchestra is in the woodwinds section.
How many musicians are in the woodwinds section?

_____



14. 30% of the brass section play trumpet.
If 6 musicians play trumpet, how many musicians are in the brass section?

_____



Suffixes – ous

List

luxurious
ravenous
notorious
tenacious
venomous
vivacious
obnoxious
momentous
tremendous
amphibious
zealous
precarious
voracious
ambiguous
impervious
tumultuous
anonymous
conspicuous
contentious
contemptuous

1. Write the word.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

2. In a group. Write the list word that belongs in each group.

rich, lavish, _____
poisonous, toxic, _____
vague, unclear, _____
famous, renowned, _____
starving, hungry, _____
disagreeable, nasty, _____
unknown, mysterious, _____

3. Chunks. Rearrange the chunks to make a list word.

nous ra ve _____
cari pre ous _____
temp ous tu con _____
ous tre mend _____
tor ous no i _____
bi ous am phi _____
ci ten ous a _____
cu con spi ous _____
mul tu tu ous _____

4. Meaning. Which list word means?

Able to live on land and in water. _____
Very hungry or starving. _____
Having an unknown name or identity. _____
Full of noise, commotion or chaos. _____
Not affected by anything. _____
Something that is not secure, or considered dangerous. _____
Having more than one meaning. _____
Something that is obvious or easily seen. _____

Suffixes – ous

5. Complete each sentence with a list word.

The box jellyfish is the world's most v_____ creature.
It was an a_____ witness that reported the crime.
He was standing on top of the ladder in a p_____ position.
I was so r_____, I ate four sandwiches and the leftover spaghetti.
His a_____ answer left us all very confused.
A frog is an a_____ creature.
Everyone put in a t_____ effort.
We stayed in a l_____ new hotel suite.
I am i_____ to his nasty comments.

Challenge words

6. Write the word.

voluminous _____
precipitous _____
prestigious _____
ostentatious _____
simultaneous _____
unscrupulous _____
synonymous _____
instantaneous _____
unpretentious _____
presumptuous _____

7. Word clues. Which challenge word matches?

done at the same time _____
highly esteemed _____
great size or quantity _____
no moral principals _____
very steep _____
a showy display designed to impress _____
happening immediately _____

8. Complete the sentence.

The word 'attempt' is s_____ with 'try'.
She is very u_____; she never tries to show off.
It was a p_____ climb up the mountain, but we made it!
Her parents were very proud when she won the p_____ award.
It was p_____ of her to ask such a personal question.

Irregular Plurals

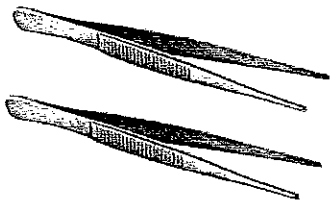
List

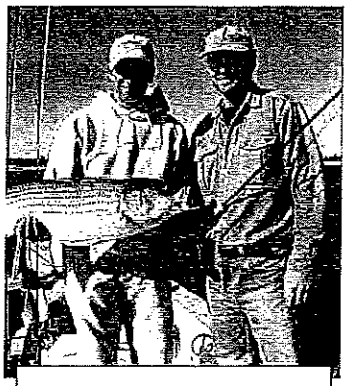
data
strata
series
crises
pliers
media
offspring
fishermen
tweezers
sportsmen
larvae
species
bacteria
barracks
crossroads
runners-up
salespeople
policewomen
teaspoonsful
mothers-in-law

1. Write the word.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

2. Name.





3. Chunks. Rearrange the syllables to make a list word.

ses cri _____
spoons tea ful _____
er fish men _____
di me a _____
racks bar _____
peo ple sales _____
ta stra _____
vae lar _____
orts men sp _____
lice men po wo _____

4. Meaning. Which list word means?

Layers of rock in the earth's surface. _____
Metal tools, with two arms, used for plucking hairs. _____
The children or young of a particular human or animal. _____
Microscopic organisms that cause living things to decay. _____
Buildings or groups of buildings used to house soldiers. _____
The place where two roads meet or intersect. _____
Insects after they have hatched, but before they become adults. _____

Irregular Plurals

5. Complete each sentence with a list word.

We collected _____ from many different sources.
We used social _____ to help promote our school's fundraiser.
There are many different _____ of dogs.
We slowed down as we approached the _____ to avoid an accident.
When Banjo got caught in the wire fence, we used two pairs of _____ to cut him free.
After training the soldiers were sent back to their _____ .

Challenge words

6. Write the word.

criteria _____
analyses _____
diagnoses _____
vertebrae _____
personnel _____
phenomena _____
culs-de-sac _____
parentheses _____
memorabilia _____
headquarters _____

7. Word clues. Which challenge word matches?

bones forming the spinal column _____

objects with sentimental value _____

the main offices of an organization _____

identification of illnesses _____

people employed by an organization _____

the standards by which something is judged _____

8. Complete each sentence.

The _____ were all evacuated when the building caught fire.
The physiotherapist popped her _____ back into alignment.
My uncle has lots of football _____ in his garage.
The spy reported back to _____ after every mission.
I placed the extra information in the sentence inside _____ .

Suffixes – ly

List

heavily
lawfully
blissfully
suddenly
regularly
remarkably
clumsily
immediately
brutally
frequently
absolutely
annually
typically
boastfully
brilliantly
separately
curiously
casually
unfortunately
ashamedly

1. Write the word.

_____

2. Word building. Add suffixes to build words.

sudden	suddenly
immediate	
clumsy	
brilliant	
heavy	
annual	
absolute	
regular	

3. Missing letters. Write the missing letters.

imm_____ hea_____
boa_____ ann_____
ash_____ brill_____
abs_____ reg_____
bru_____ sud_____
typ_____ law_____
blis_____ fre_____
curi_____ unf_____

4. Chunks. Rearrange the letters to make a list word.

mar ly kab re _____
en dd ly su _____
que nt ly fre _____
pi cal ly ty _____
so lut ab ely _____
a ra t ely sep _____
ham ed as ly _____
for tun ely at un_____
iou sly cur _____
ful ast bo ly _____
ian brill tly _____
tal bru ly _____
nu al an ly _____
ly mm i edi ate _____
lar u reg ly _____
ful iss ly bl _____

Suffixes – ly

5. Underline the spelling mistakes. Write the word correctly.

She strolled casuely in the park on the warm summer's day. _____
My baby brother chekely ran away from our dad. _____
The diamond shone briliantely in the sunshine. _____
I like to exercise regulely to stay fit and healthy. _____
We meet anualy for a family reunion. _____
Ken frequentely went to the library to borrow books. _____
I sudenley remembered that I had baseball training and ran down to the field. _____

Challenge words

6. Write the word.

traditionally _____
anxiously _____
accidentally _____
academically _____
artificially _____
consequently _____
competently _____
undoubtedly _____
aggressively _____
alternatively _____

7. Hidden words. Find the challenge word.

ahdiacademicallydgm _____
djhxcompetentlyxgvf _____
sdndundoubtedlyfvd _____
gddtraditionallyvbdb _____
dlgsaccidentallyxbll _____
vsdartificiallyvsdsrsd _____
aasiugalternativelyss _____
sdudaggressivelydvhd _____
saopconsequentlysfes _____
skoskanxiouslyfevxc _____

8. Another way to say it. Which challenge word could replace the underlined word?

I waited <u>nervously</u> for the doctor to tell me my results. _____
The red stone in her ring was <u>synthetically</u> produced. _____
I didn't get much sleep last night and <u>therefore</u> was very sleepy today. _____
He was sent to the principal after he <u>forcefully</u> pushed his classmate. _____

Word endings – ery, ary, ory

List

literary
January
bribery
cannery
livery
trickery
planetary
legendary
imaginary
sensory
customary
advisory
artillery
centenary
accessory
adversary
compulsory
supervisory
documentary
complimentary

1. Write the word.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

2. Word clues. Which list word matches?

assisting a criminal _____
opponent or enemy _____
large weapons _____
having to do with our senses _____
comes before February _____
existing only in your mind _____

3. Chunks. Rearrange the syllables to make a list word.

til y ler ar _____
y ar er lit _____
y ad vis or _____
y u Jan ar _____
ry so vi per su _____
liv y er _____
so com ry pul _____
y plan tar e _____

4. Sort the words.

ery	ary	ory

Word endings – ery, ary, ory

5. Complete each sentence with a list word.

They gave him a reduced sentence as he was only an a_____to the crime.
The teacher only had c_____ things to say about her class.
A c_____ marks the hundredth anniversary of an event.
It is c_____ for the bride to wear white on her wedding day.
For our group project, we are making a d_____ about the history of our school.
There was a mix up at the c_____ and dog food was put in baked beans tins!

Challenge words

6. Write the word.

contemporary _____
parliamentary _____
subsidiary _____
beneficiary _____
sedentary _____
contradictory _____
conciliatory _____
chicanery _____
auxiliary _____
supplementary _____

7. Word clues. Which challenge word matches?

the clever use of deception _____
related to the subject but less important _____
involving little physical activity _____
extra support _____
one who will receive or inherit certain benefits _____
belonging to the present time _____

8. Complete each sentence.

The crew started to worry when their a_____ power shut off.
The teacher uses s_____materials to help educate her students.
We were told to focus on the main point, disregarding all s_____ information.
My mother is the b_____of my grandfather's will.
They told c_____stories about what really happened.

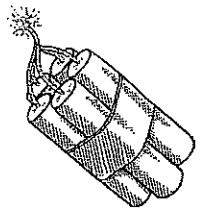
GRADE 6

Worksheet A

Helping Hands

Name _____ Date _____

1 **Add the suffix "-ion" to these words to form nouns.**



evacuate _____ explode _____

decorate _____ desperate _____

instruct _____ organize _____

2 **Write the base word of each of the following words.**

university	musician	critical	piracy	ignorant
_____	_____	_____	_____	_____

3 **Add an ending to each word in the box to complete the sentences correctly.**

assist
danger
person
rely
nerve

He called for an _____ to help him into his costume.

The trek up the mountain was long, steep and _____.

A diary is private and _____.

Bryden is a _____ member of our team.

I always feel _____ when I go to the dentist.

4 **Find and fix the spelling mistake in each sentence.**

- The cost of elecktrisity continues to rise. _____
- Many people around the world have insufishent food to eat. _____
- The door was parshelly open. _____
- The cave we entered was dark and mystrous. _____
- They predict a cloudy day with ockasionle showers. _____

Spelling Challenge **Unscramble the letters to spell five WIND INSTRUMENTS.**

uftle	ephxansoo	oobe	rintalce	mbtorneo
_____	_____	_____	_____	_____

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GRADE 6

Worksheet B

Helping Hands

Name _____ Date _____

1 **Add a prefix to complete the antonym of each word. Choose from "un-", "in-" or "dis-".**

_____ desirable
_____ similar
_____ familiar
_____ dependent
_____ sufficient
_____ comfortable

2 **Add the correct endings.**

- The prime **minist** ____ is in America on **offic** _____ business.
- She is accompanied by a **person** ____ **assist** _____ and a bodyguard.
- His job as an **electric** _____ can sometimes be **danger** _____.
- The soldiers remained **vigil** _____ after the first loud **explos** ____.
- The **technic** _____ carries a **port** _____ battery pack.

3 **Change these adjectives to adverbs by adding "-ly".**

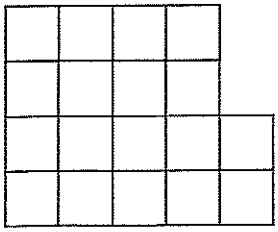
commercial _____
sufficient _____
desperate _____
regular _____
persistent _____
musical _____
similar _____
regional _____

4 **Add a suffix to each word in the box to complete the sentences correctly. Choose from "-ent" or "-ant".**

persist
depend
confide
correspond
ignore

If you are _____, you will reach your goal.
Mr. Corby has a wife and three _____s.
Our coach is _____ that our team will win the game.
Anne Barker works as a foreign _____ for ABC TV.
They remained _____ of the events unfolding on the peninsula.

Spelling Challenge **Use the letters in this word to make new words.**



t r o m b o n e s

_ _ _ _ _ _ _ _ _

Score five points for each correct word.

My score: ☐

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GRADE 6

Helping Hands

Worksheet A

1. evacuation, decoration, instruction, explosion, desperation, organization
2. universe, music, critic, pirate, ignore
3. assistant, dangerous, personal, reliable, nervous
4. electricity, insufficient, partially, mysterious, occasional

flute, saxophone, oboe, clarinet, trombone

Worksheet B

1. undesirable, dissimilar, unfamiliar, independent, insufficient, uncomfortable
2. minister, official; personal, assistant; electrician, dangerous; vigilant, explosion; technician, portable
3. commercially, sufficiently, desperately, regularly, persistently, musically, similarly, regionally
4. persistent, dependants, confident, correspondent, ignorant

t r o m b o n e s
_ _ _ _ _ _ _ _ _

4 letters: bent, best, bets, bone, boom, boon, boot, bore, born, eons, mobs, moon, moor, moot, more, morn, most, nest, nets, norm, nose, note, oboe, omen, ones, onto, ores, rent, rest, robe, robs, room, root, rose, rots, sent, snob, snot, some, soon, soot, sore, sort, stem, tens, term, toes, tomb, tone, tons, tore, torn

5 letters: bones, booms, boost, boots, bores, borne, bosom, broom, metro, moons, moors, moose, moron, motor, noose, norms, notes, omens, onset, rents, robes, robot, rooms, roost, roots, smote, snore, snort, sober, stern, stone, store, storm, tenor, terms, tombs, tomes, toner, tones, torso

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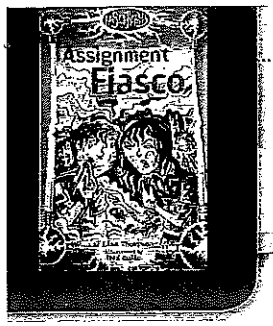


Worksheet 1

Lesson 211 • Assignment Fiasco

Name

Cause and Effect

To find cause and effect, we ask why something happens and what the result is.

Highlight the words that tell us why Hannah went to sit under the tree.

Underline the words that help us work out how Josh felt when Hannah said she was going to sit under the tree.

Circle the words that show how close Hannah was to the dead snake.

Read the passage.

"Oh, I can't work with you," said Hannah. "This is insane. I need some air." She grabbed her books and looked out the window. "I'm going to sit under that tree."

"Wh...? Wha...? What tree?" stammered Josh. Hannah was already out the door and headed for his snake tree. All he could do was watch through the window as she walked down the stairs and sat right under the branch. He couldn't help but notice how undead the snake looked. Normally, he would have been pleased. Right now, he felt sick. Josh reckoned it would take Hannah about three seconds to notice the snake. He began to count.

"AAAAAAAAAAHHHHHHHHHHHHHHHHHHHHHH!"

Color the words that show how long Josh thought it would be before Hannah noticed the snake.

Put a box around Hannah's reaction when she saw the snake.

Color the correct answers

1 **Why** did Hannah go and sit under the tree?

- ○ It was hot and stuffy in the library.
- ○ She didn't want to work with Josh.
- ○ She thought the fresh air would help her think.
- ○ She was feeling sick.

2 What **effect** did Hannah's decision to sit under the tree have on Josh? He felt a sense of ...

- ○ excitement.
- ○ disappointment.
- ○ shock.
- ○ pleasure.

3 What was the most likely **reason** there was a dead snake in the tree?

- ○ A bird had dropped it there.
- ○ A cat had dragged it there.
- ○ The science class had left it there.
- ○ Josh had put it there.

4 **Why** did Josh think it would take Hannah only three seconds to notice the snake? It was ...

- ○ a bright color.
- ○ right above Hannah's head.
- ○ smelling badly.
- ○ very big.

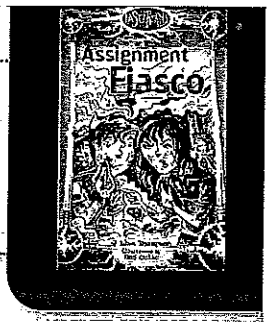
5 What **happened** when Hannah saw the snake? She ...

- ○ screamed.
- ○ fainted.
- ○ ran away.
- ○ reached up to touch it.

CCSS.ELA-LITERACY.RL.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Worksheet 2

Lesson 211 • Assignment Fiasco



Name

Read the passage.

Highlight the reason Josh sat behind Hannah.

Underline the reason Hannah was excited.

Color the words that show why Hannah would still be sticking to the Assignment Quest rules if she used Emma's idea.

Hannah sat with Emma, a girl from the year above. Josh hid in the seat behind Hannah, waiting for another chance to talk to her. Then he overheard Hannah's plan.

"That is such a good idea," cried Hannah with excitement. "It gets me out of working with Super Pain and I'm not cheating or breaking any of the Assignment Quest rules."

"Exactly," agreed Emma. "You're still working in a team and you're not swapping him for someone else. You're just getting him to do what he's best at — which in this case isn't much."

They both giggled.

Josh heard Hannah say, "So what's the web address for this site, Emma? I'd better write it down."

Underline the words that suggest that Emma does not have a high opinion of Josh's abilities.

Circle the word that shows where Hannah intends to find help with her assignment.

1 **Why** did Josh hide in the seat behind Hannah?

2 Carefully explain **why** Hannah was excited.

3 What **caused** the girls to giggle?

Worksheet 1

Lesson 216 • Out Now!

Name

Compare and Contrast

When we compare and contrast information, we look for the similarities and differences between details in the text.

Highlight the words that give information about two of the articles for the summer issue.

Circle the words that suggest that there is a feeling of excitement about the summer issue.

Underline the sentence that helps to answer question 2.

Read the passage.

As I read through the articles for the summer issue, I notice there's an interesting one on making skateboards and another on secret beach huts that kids have built. Both are great for the summer issue.

There's a huge buzz around the summer issue — and this one is shaping up to be our biggest ever. Our readers and advertisers look forward to it as we always try to do something to make these issues different and collectable. We have a few surprises in the pipeline — which is a good sign.

Putting together this issue can take eight months to plan and organize. This is fairly stressful as we still have to publish the monthly issues of *Hive* in the meantime.

Put a box around the word that suggests that readers like to keep the summer issues.

Color the words that show how long it takes to plan and organize a summer issue.

Circle the word that indicates how often *Hive* is published.

Color the correct answers

1 How are the articles on skateboards and secret beach huts that kids have built **similar**?

- ○ They are written by the same person.
- ○ They contain the same number of words.
- ○ Both will be included in the summer issue.
- ○ Both are about secret projects.

2 How will the current summer issue be **different** from previous ones? It ...

- ○ will be more exciting.
- ○ contain more advertisements.
- ○ will be more interesting.
- ○ will be the biggest one yet.

3 What is **similar** about all of the summer issues? The editorial team tries to make each one ...

- ○ more colorful.
- ○ collectable.
- ○ longer.
- ○ less expensive.

4 How is the summer issue **different** from the monthly issues of *Hive*? It ...

- ○ takes longer to plan and organize.
- ○ contains more photographs.
- ○ contains fewer advertisements.
- ○ targets a different audience.

CCSS.ELA-LITERACY.RI.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Worksheet 2

Lesson 216 • Out Now!

Name

Read the passage.

Highlight the sentence that shows how the content of early magazines was different from the content of modern magazines.

Underline the sentence that describes the covers of early magazines.

Early magazines did not restrict themselves to leisure interests but often had political and religious content. In the mid-1700s, magazines did not always have what we now see as covers. Many had their cover page as a table of contents, or they began an article on the cover. The first teen magazines appeared in America and England in the 1940s.

There's now a magazine for practically every imaginable interest, from fashion or food, to football or fishing.

There are more magazines today than ever before. Magazines both inform and entertain. It's this magical combination that has kept sales rising for nearly 300 years.

Color the sentence that suggests that modern magazines cater for all tastes.

Put a box around the words that show what the main purpose of magazines has been for the last 300 years.

1 Carefully explain the **differences** between early and modern magazines.

2 In what way are modern magazines **similar** to early magazines?

Worksheet 1

Lesson 217 • Recycling

Name

Sequencing Events

To identify the sequence of events in a text, we usually look at numbers and words that give clues to the order in which things happen.

Read the passage.

Circle the abbreviation for polyethylene terephthalate.

Highlight the first step in the recycling of PET bottles.

Underline the words that show how PET bottles are sorted.

Plastic stamped with identification code 1 are PET (polyethylene terephthalate) plastics, often used as soft drink, water and juice bottles.

PET bottles are recycled by separating them from other types of plastic, and sorting them into different color groups: clear, blue and green, and a mixed color group.

They are then crushed and transported to the recycler.

Once there, they are sorted again, washed and then shredded into flakes. The flakes are washed, dried and melted to make new plastic products: fleece clothing, pillows, carpets, ropes, sleeping bags, life jackets, furniture, building materials — and more PET bottles.

Color the words that show where the PET bottles are taken after they have been crushed.

Underline what happens to the flakes before they are made into new plastic products.

Color the correct answers

1 Which process happens **first**? PET bottles are ...

- ○ sorted into different color groups.
- ○ separated from other types of plastic.
- ○ transported to the recycler.
- ○ shredded into flakes.

2 What happens **before** the PET bottles are taken to the recycler? They are ...

- ○ shredded.
- ○ washed.
- ○ melted.
- ○ crushed.

3 Which process happens **last**? The PET bottles are ...

- ○ transported to the recycler.
- ○ sorted into different color groups.
- ○ crushed.
- ○ separated from other types of plastic.

4 What happens **after** the PET bottles have been shredded into flakes? The flakes are ...

- ○ sorted.
- ○ washed.
- ○ crushed.
- ○ separated.

5 What is the **final** process before the flakes are made into new plastic products? The flakes are ...

- ○ melted.
- ○ dried.
- ○ washed.
- ○ sorted.

CCSS.ELA-LITERACY.RI.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Worksheet 2

Lesson 217 • Recycling

Name

Read the passage.

Highlight the first step in the recycling process.

Underline what happens after the glass has been sorted.

Circle the name for crushed glass.

Glass for recycling is sorted by color: clear, amber and green. Materials that contaminate the glass, such as metal bottle tops, are removed.

The glass is crushed into cullet. Cullet is often mixed with the raw materials of glass (sand, soda ash and limestone) before being melted in a furnace at up to 2,700° Fahrenheit.

The molten glass is poured into molding machines and air is blown through it to shape new glass products. These are cooled down slowly before they can be used.

Put a box around the temperature at which the glass is melted.

Color the sentence that shows how new glass products are made.

Complete the following sentences so that they show the correct sequence for recycling glass.

The first step in the recycling of glass is to _____

_____

After that, _____

_____

_____

Once the foreign materials have been removed, _____

_____

The cullet is then melted. This is done by

_____

_____

To produce new glass products, _____

_____

_____

The final step _____

_____

Worksheet 1

Lesson 220 • Ready for Take-off

Name

Reading Diagrams

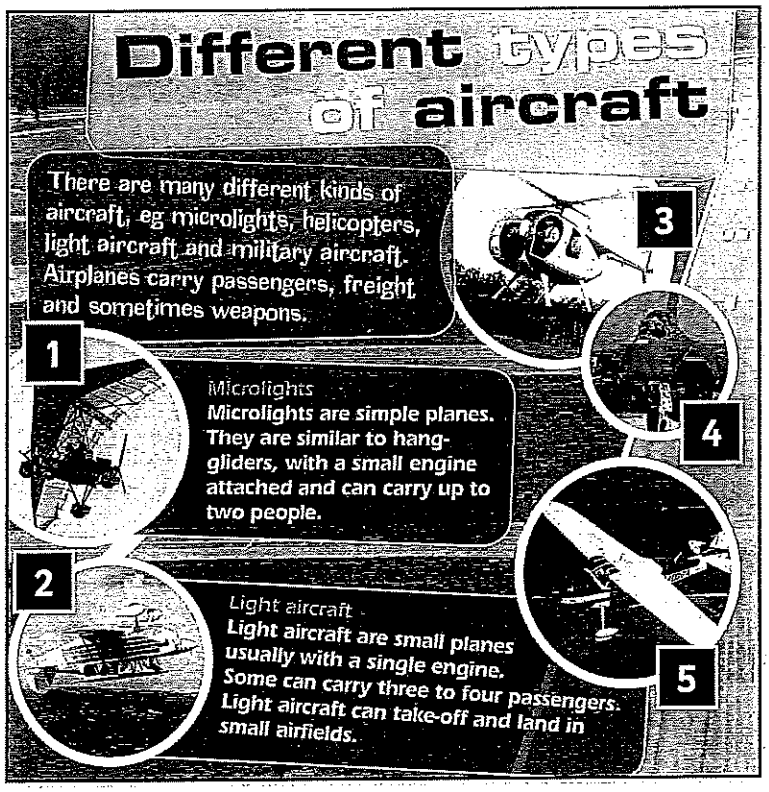
Diagrams and pictures are often used to explain scientific or technical ideas. They help us understand the text by representing information in a visual form.

Study the text.

Highlight the word *helicopters* and place a tick next to the picture of a helicopter.

Put a box around the name of the most basic type of aircraft.

Color the number of the picture that indicates the military aircraft.



Circle the type of craft microlights are compared to.

Underline the words that describe the type of aircraft shown in picture 5.

Put a box around the maximum number of passengers a light aircraft can carry.

Color the correct answers

1 What is the main purpose of the pictures in the above text? The pictures show what the aircraft mentioned in the text ...

○ can do. ○ are used for. ○ look like.

2 Which picture shows a helicopter? Picture number ...

○ 1 ○ 2 ○ 3 ○ 4

3 Which picture shows a military aircraft? Picture number ...

○ 1 ○ 2 ○ 3 ○ 4

4 Which aircraft pictured above is the most basic type of aircraft?

○ the microlight ○ the military aircraft ○ the helicopter ○ the light aircraft

CCSS.ELA-LITERACY.RI.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Worksheet 2

Lesson 220 • Ready for Take-off

Name

Study the text.

Circle the word that means *height above ground or sea level.*

Highlight another name for an attitude indicator.

Underline the purpose of an attitude indicator.

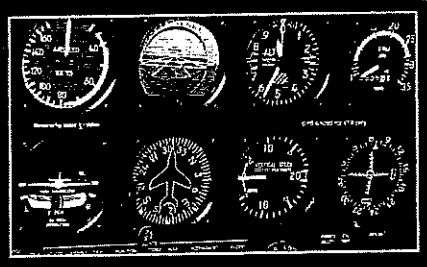
Aircraft instruments

Aircraft have instruments to provide the pilot with important information.

Basic aircraft instruments include:

- airspeed indicator — indicates how fast the plane is moving through the air
- altimeter — indicates the altitude of the aircraft, above the ground or above sea level
- attitude indicator — also called an *artificial horizon*, indicates the exact orientation of the plane as it pitches and rolls through the air.

Modern airplanes have lots of instruments to keep track of!



Keeping yourself the right way up — even when you can't see anything!

Circle the image of an airplane in one of the pictures.

Place a tick beside the pilot whose stripes show that he has the higher rank.

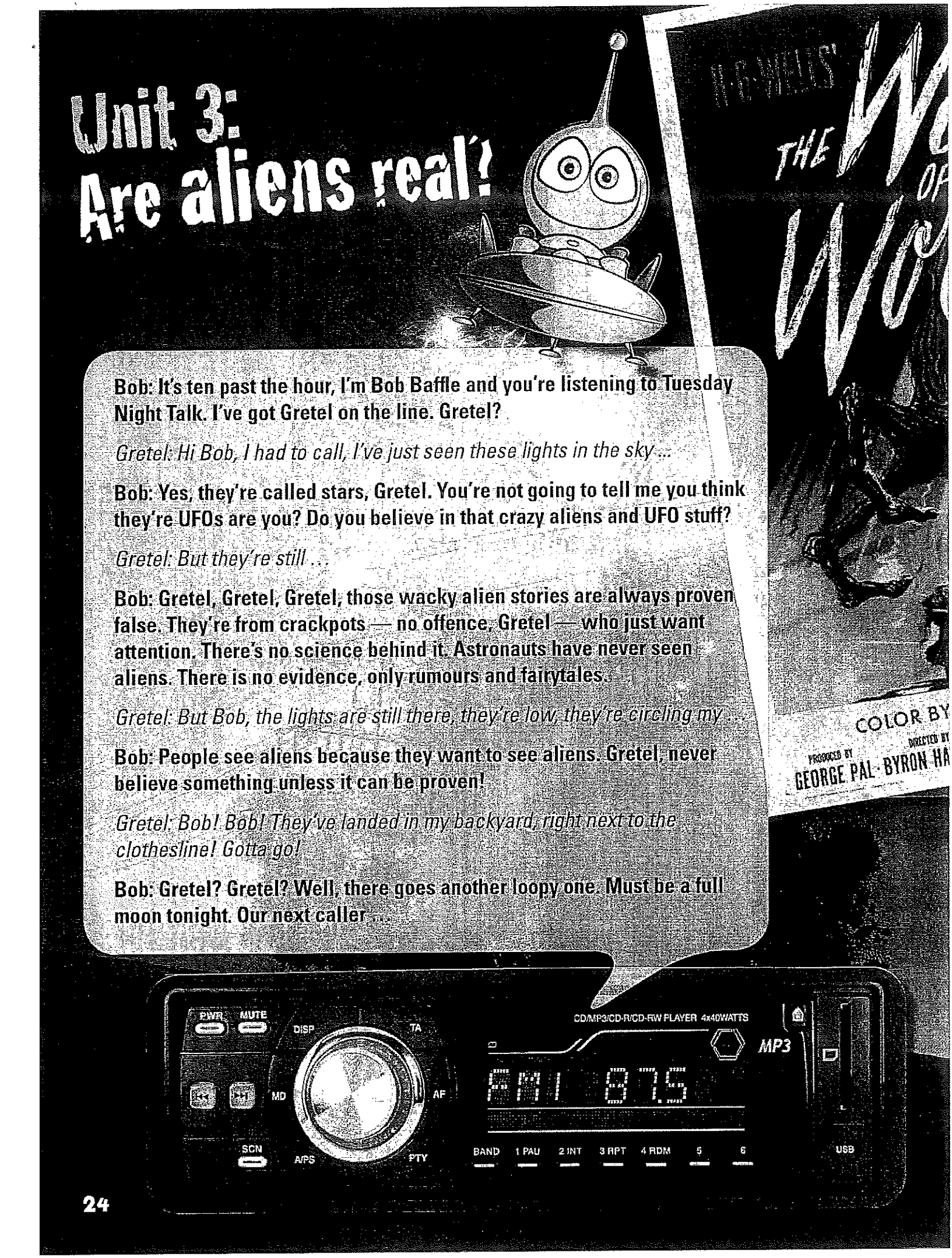
Place a cross beside the instrument that is most likely the attitude indicator.

1 Carefully explain how the pictures of aircraft instruments add to the reader's understanding of the text.

2 If there were no text to accompany the pictures, how would the reader know that the pictures are of aircraft instruments?

3 What do the pictures suggest about the number of pilots required to fly a large passenger plane?

Unit 3: Are aliens real?



Bob: It's ten past the hour, I'm Bob Baffle and you're listening to Tuesday Night Talk. I've got Gretel on the line. Gretel?

Gretel: Hi Bob, I had to call, I've just seen these lights in the sky ...

Bob: Yes, they're called stars, Gretel. You're not going to tell me you think they're UFOs are you? Do you believe in that crazy aliens and UFO stuff?

Gretel: But they're still ...

Bob: Gretel, Gretel, Gretel, those wacky alien stories are always proven false. They're from crackpots — no offence, Gretel — who just want attention. There's no science behind it. Astronauts have never seen aliens. There is no evidence, only rumours and fairytales.

Gretel: But Bob, the lights are still there, they're low, they're circling my ...

Bob: People see aliens because they want to see aliens. Gretel, never believe something unless it can be proven!

Gretel: Bob! Bob! They've landed in my backyard, right next to the clothesline! Gotta go!

Bob: Gretel? Gretel? Well, there goes another loopy one. Must be a full moon tonight. Our next caller ...

The War of the Worlds
by H. G. Wells

BOOK ONE
THE COMING OF THE MARTIANS

CHAPTER ONE
THE EVE OF THE WAR

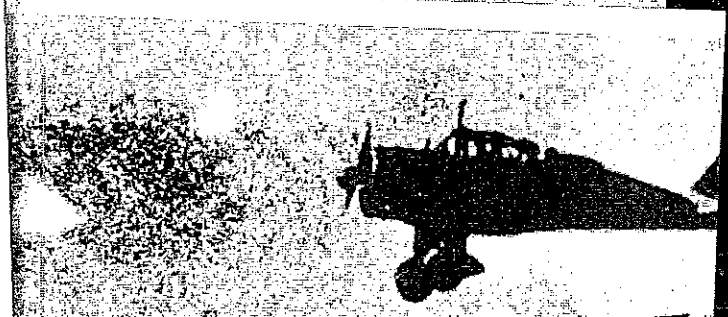
No one would have believed in the last years of the nineteenth century that this world was being watched keenly and closely by intelligences greater than man's and yet as mortal as his own; that as men busied themselves about their various concerns they were scrutinised and studied, perhaps almost as narrowly as a man with a microscope might scrutinise the transient creatures that swarm and multiply in a drop of water. With infinite complacency men went to and fro over this globe about their little affairs, serene in their assurance of their empire over matter. ... Yet across the gulf of space, minds that are to our minds as ours are to those of the beasts that perish, intellects vast and cool and unsympathetic, regarded this earth with envious eyes, and slowly and surely drew their plans against us.

Is It a Bird? Is It a Plane?

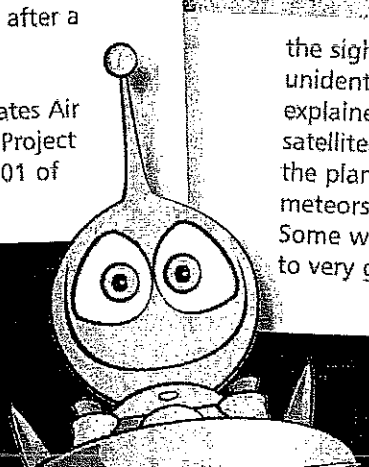
When a new alien movie hits the big screen, reports of alien activity often increase. A new book on aliens can have the same effect. Many of these reported sightings happen at night, or when the person is driving along a deserted road.

During World War II, many British and American pilots said they saw bright shining balls near their aircraft. They called them 'foo fighters', after a comic that was popular then.

Between 1947 and 1969, the United States Air Force studied 12 618 UFO sightings in 'Project Blue Book'. They discovered that only 701 of the sightings were really unidentified. The rest were explained as aircraft and satellites, weather balloons, the planets Venus or Jupiter, meteors, or unusual clouds. Some were also put down to very good imaginations!



This photo of a Japanese fighter plane, taken in 1945, is said to show two 'foo fighters' in the distance.



In the texts

1 What do the texts on pages 24–25 have in common? Circle one.

introduction author topic conclusion

2 Match each text to its type.

Bob and Gretel's dialogue	poster
H.G. Wells' *The War of the Worlds*	radio transcript
Is It a Bird? Is It a Plane?	article
The War of the Worlds, Chapter 1	narrative

3 Describe each text and explain what information it gives about the topic.

a Radio transcript

b Poster (not the movie)

c *Is It a Bird? Is It a Plane?*

d *The War of the Worlds, Chapter 1*

4 a Rate each text on a scale of 1 to 5 for believable information, where 1 is *most believable* and 5 is *least believable*.

radio transcript ☐ poster ☐

Is It a Bird? Is It a Plane? ☐ *The War of the Worlds, Chapter 1* ☐

b Why is the text with the highest rating the most believable?

c Rate each text on a scale of 1 to 5 for interest and entertainment.

radio transcript ☐ poster ☐

Is It a Bird? Is It a Plane? ☐ *The War of the Worlds, Chapter 1* ☐

d Why is the text with the highest rating the most interesting and entertaining?

5 **With a partner, read the radio transcript, taking turns to read each of the parts.**

First, read without using the text's punctuation to guide the way you read. ☆ Done

Second, read with the pauses and inflections as shown by the punctuation. ☆ Done

6 **Highlight an ellipsis (...) in the transcript.** In this text, they show interrupted speech.

Why was Bob Baffle always interrupting Gretel?

7 **Bob Baffle has an opinion about aliens and UFOs.** How does his language show this?

Give examples.

8 **Study the first sentence in *The War of the Worlds, Chapter 1*.**

a Rewrite it as several sentences.

b Does this improve the original text? Explain your answer.

Read and learn

1 Write definitions for these words.

a keenly:

b intelligences:

c mortal:

d scrutinised:

2 Read *The War of the Worlds, Chapter 1* and answer true (T) or false (F).

- ☐ Mankind was not worried about intruders from space.
- ☐ Our minds are just like those from outer space.
- ☐ Aliens like us and care for us.
- ☐ Aliens want what we have.
- ☐ Aliens are very smart.

3 What causes an increase in reports of aliens?

4 What are foo fighters?

5 How many UFO sightings were found to be real objects between 1947 and 1969?

6 What makes the poster frightening?

7 Who was H.G. Wells?

8 What is technicolor?

Unit 8: It's only water ...

Water on tap

Many people in the world enjoy access to lots of clean, fresh water. How does it get to their homes?

Fresh water is pumped from a lake or dam to a water filtration plant, where it is filtered to remove weeds, fish and minerals. It is then pumped into storage tanks.

From the storage tanks it moves into underground water **mains**, which carry water to taps in our houses. When we open the tap, the pressure in the pipes pushes the water out. Water pipes can also be connected directly to wells or **boreholes** to provide water to houses that are not connected to the water mains.

Using less

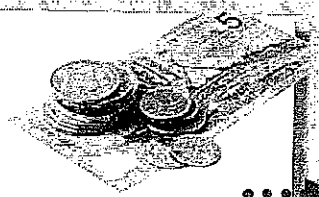
In industrialised countries, each person uses up to 1 000 litres of water every day to drink, cook, wash, flush toilets and water gardens. However, in countries where water is not piped into houses, people use as little as five litres per day.

We cannot drink less water, but we can find ways to use less of it for other things. Some ideas are:

- Repair dripping taps.
- Take a quick shower instead of a bath.
- Wash dishes in a sink, not under a running tap.
- Wash the car with a bucket of water instead of a hose.
- Water the garden at cool times of the day.

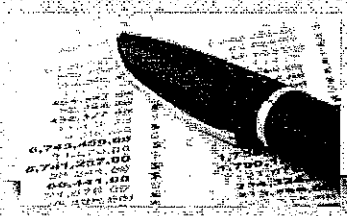
Can you think of other ways to conserve water?

How money turns into water



You make a donation. Thanks!
Many non-government organisations (NGOs) do development work in other countries.

The money is added to the NGO's general funds.
The NGO also needs money for administration, such as paying staff and renting an office.



The NGO decides which projects to support.
The NGO forms a committee to decide which projects to support. The NGO works with partner organisations in other countries to design projects, such as building toilets or funding a community nurse.

Water for Everyone?

All humans need water to survive. In modern, industrialised countries, clean water is easy to find — we simply turn on a tap. In some countries, water is a luxury. More than one billion people in the world do not have access to clean, safe water.

Not enough water

In the **Developing World**, many people cannot get enough water for drinking and cooking. If they can find water, they may have to carry it long distances from rivers and wells. Women and children spend a large part of every day fetching water. This prevents them from doing important work and going to school.

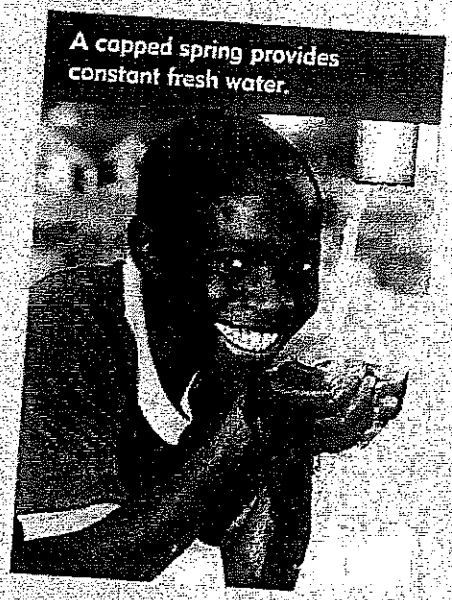
If there is a drought, there is no water to collect.

Dirty water kills

Where there is no running water, people don't have flushing toilets and sewerage systems.

Human and animal waste ends up in rivers and can cause diseases. Every day about 6 000 people in the Developing World, mostly children under the age of five, get sick and die from drinking polluted water.

The United Nation's Millennium Development Goals call for the number of people who don't have sustainable access to safe drinking water and basic **sanitation** to be halved by the year 2015. This big goal can be achieved if governments make water and sanitation a funding priority for the world's poorest people.



A capped spring provides constant fresh water.

A protected well and pump supplies clean water to students of Shambarai Primary School in Tanzania.

This traditional, hand-dug well in Mali isn't deep enough to reach a steady supply of water.

The NGO may receive extra funds.
AusAID, the Australian Government agency for international development, may give extra money.

Money is sent to the partner organisation.
Local villagers and the partner organisation buy materials and start work.

A village gets clean water!
Clean water means better health and less disease.

The project is reviewed.
The partner organisation and the NGO check that the money was spent as planned, and that the project is a success.

In the texts

1 ***Water and Your Home*** **and** ***Water for Everyone?*** **contain explanations, which tell how or why things happen.**

a Circle the explanations in each text. ☆ Done

b Complete these sentences in your own words.

The explanation in *Water and Your Home* tells us how

The explanation in *Water for Everyone?* tells us how

2 Why does the author use dot points in *Water and Your Home*?

3 An acronym is a word formed from the first letter or letters of a group of words.

Find out the meanings of these acronyms.

a AusAID:

b WHO:

c RAAF:

d UNMDG (Hint: see page 77):

e Which acronym above is not pronounced as a word?

4 ***How money turns into water*** **is an explanation shown as a flow chart.**

a Write a new title for the explanation that also begins with *How*.

b What do the arrows mean?

c What difference does it make to have photos with the text?

5 a What is the purpose of a caption?

b Write your own caption for the photo of students pumping water on page 77.

Read and learn

1 The bold words in *Water and Your Home* and *Water for Everyone?* belong in a glossary.

Write your own definitions for the words.

a mains:

b boreholes:

c Developing World:

d sanitation:

2 List other words from pages 76 and 77 that you think should be included in a glossary.

3 *Spring* is a homonym. Write four meanings for it.

1

2

3

4

4 Read *Water and Your Home*.

a Write numbers to complete these sentences.

Every year, a person in an industrialised country uses about _____ litres of water. That's enough to fill about eight swimming pools! During the same period, about _____ people in the Developing World die from drinking polluted water.

b Why do you think people wash cars using garden hoses?

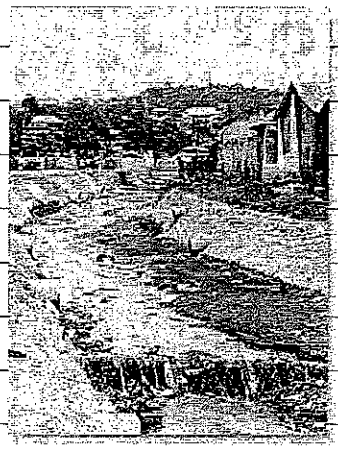
c Why would watering the garden at cool times of the day save water?

5 In *Water for Everyone?*, what do you think *water is a luxury* means?

6 Circle the three most important reasons to have clean water.

beautiful views	staying cool	cooking
health	water sports	growing food
making ice	swimming lessons	fish farming

7 **Write captions for these photos about how drinking water can become polluted.**



8 **Write three sentences which explain why polluted water is bad for human health.**

9 **Why do you think the last step in the flow chart is included?** What would happen if an NGO skipped this step?

10 **Choose an NGO that works in Africa.** Research and explain what it does.

UNIT 12: TREES FOREVER?

Forests cover almost one-third of the Earth's land.

The boreal forests in Siberia make up the largest forest region. They cover almost four million square kilometres.

The Amazon rainforest is shrinking every day. People cut and burn down trees for wood products and to clear the land for farms. Most of the temperate forests that once covered Europe and North America have already been cleared.

DID YOU KNOW?

Trees produce the oxygen we need to breathe.

Winter lasts at least six months in the Siberian forests.

Sustainable Forests?

Forests play an important role in the health of the planet, but we continue to cut them down. Is it possible to use forests without destroying them?

What do forests mean to people?

Forests mean different things to different people. To the native Indians of Brazil, the forest is their home. A logging company sees a forest as a source of timber. For a logging worker, it is a place to work and earn a living. To someone living in a city, a forest might be a place to find peace and relaxation. For governments of developing nations, forests provide products to export, and people with land for farming.

For and against

Logging companies argue that forests are a renewable resource to use in a sustainable way — new trees can be planted to replace the ones removed. The logging industry employs many people, and logging produces things that people want, such as timber, paper, tissue, cardboard and furniture.

Conservationists say that forests, especially tropical rainforests, are vital to the health of the planet. They want logging in "old growth forests" — the mature forests that have not been disturbed by people — to stop because forest ecosystems are damaged by logging. They argue that trees should only be logged from plantation forests, which are "tree farms" grown especially to be cut down for wood products. Conservationists believe that people working in the old-growth logging industry could find jobs in the plantation timber and tourism industries.

c u @ rally nr red tent. pls bring lots posters. dont b l8

Wood

Wood is a natural material from living trees. It is made of plant cells.

Plant cells contain **cellulose**, a type of sugar. It links together to make wood fibres.

Wood burns easily. Its main use for thousands of years was as a fuel for cooking and heating. Wood is also used as a building material because it is strong and light compared to other building materials. Australia removes about 25 million cubic metres of wood from its forests each year.

Wood can be made into synthetic materials. Particle board is made from pieces of wood mixed with wax and glue. Particle board is cheaper and denser than natural wood. It is used to line ceilings and walls and to make furniture.

In the texts

1 a What is the main topic of the texts on pages 120 and 121?

Underline the most accurate answer.

wooden objects	different types of trees	importance of forests
threats to forests	uses of wood	rallies

b Use dot points to list the issues that could be discussed on this topic, eg *Can timber workers find jobs if logging is halted?*

2 a Underline the sentence that introduces the topic in *Sustainable Forests?* ☆ Done

b What does the question mark mean in the title of this text?

3 a Who do you think wrote the SMS message on page 120?

b What are the advantages of using mobile phones to send messages?

4 Look at the posters on page 121.

a Circle the features of a good poster.

modern design	humour	pictures	symmetry
correct information	long words	a slogan	large size
correct spelling	phone number	the designer's name	

b What important event information is missing from the posters?

c If you were organising one of the rallies, where would you place posters to promote it?

Read and learn

1 Write definitions for these words.

a rally:

b renewable:

c cells:

d natural:

2 a Read the text at the top of page 120 and complete these sentences.

Forests cover _____ than one-third of the Earth's land. The Amazon rainforest is getting _____. The boreal forests are _____ than any other forest region.

b What is the main challenge to the Amazon rainforest?

3 True or false?

a The posters on page 121 promote forest logging.

b The same people would go to both rallies.

c The rallies are at the same location.

d The rallies would sound the same.

4 On page 121, write a pro-logging slogan in the blank space on the poster. ☆ Done

5 a Underline the words in *Sustainable Forests?* that explain what sustainable logging is.

☆ Done

b What is an old-growth forest?

6 Complete the table.

People	Role of forests in their lives
a logging worker	
b native Brazilian Indians	
c	a source of timber

7 **What do conservationists believe should happen to old growth forests?** Why?

8 **Read *Wood* on page 121.**

a List the main advantages of wood as a product.

b What three materials are in particle board?

c List everything made of wood in the photo of the dining room on page 121.

d What would your life be like without wood products?

9 **What does *pro-logging* mean?**

10 **What does the slogan "not in our backyard" mean?**

11 **The SMS message on page 120 doesn't use complete words.**

Write out the message in complete words and sentences with correct punctuation.

12 **What is a boreal forest?**

13 **How would a "tree farm" be similar to other types of farms?**

Your turn

1 Many discussions end with a conclusion.

Write a conclusion for *Sustainable Forests?*

It may — but doesn't have to — support one side of the discussion.

2 a Brainstorm the arguments for and against logging old growth forests with classmates. ☆ Done

b Write a discussion about the topic.

Can Old Growth Forests Survive?

A discussion looks at more than one point of view. It may end with the writer's point of view or summarise both points of view. It has:

- an introduction that describes the issue
- paragraphs with arguments for and against (each argument should have supporting evidence)
- words that show importance and value
- a conclusion that may or may not support one side.

Introduce the topic.

Arrange your points for both sides of the discussion and write them in sentences. Use modal language, such as *we must not* or *nobody cares enough*. Add supporting statements to your points.

Use connectives, such as *On the other hand* or *However*, to begin sentences.

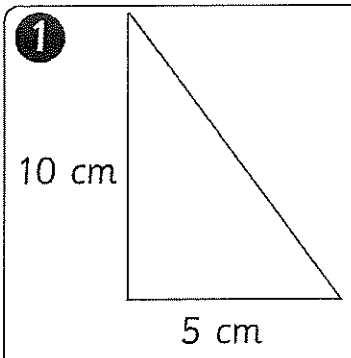
End with a conclusion about the topic.

High Rise

EducationCity

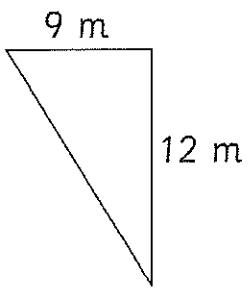
Write the area of the right-angled triangle in the boxes below. You may need a calculator. One has been done for you.

1



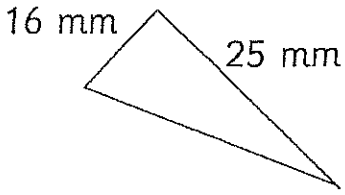
area = 25 cm²

2



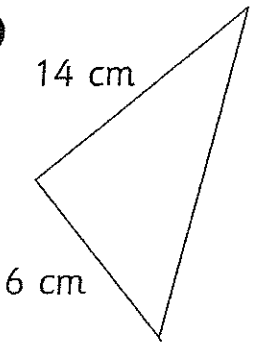
area = 54 m²

3



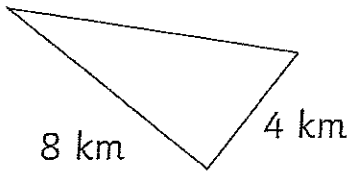
area = 200 mm²

4



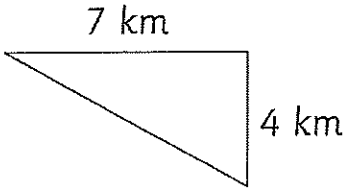
area = 42 cm²

5



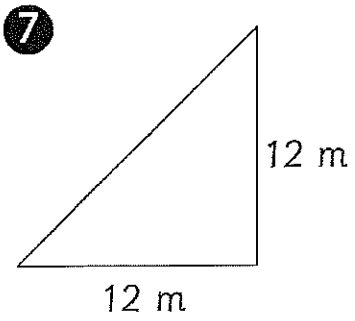
area = 16 km²

6

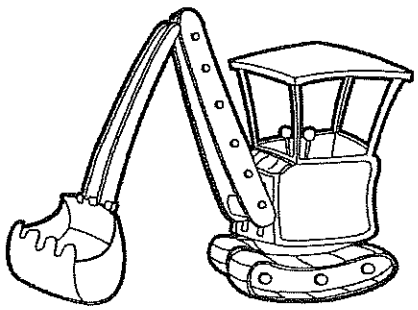


area = 14 km²

7



area = 72 m²



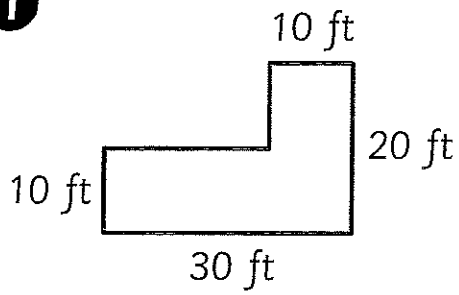
Now draw your own right-angled triangle on the back of the sheet. Label the lengths of the base and height. Then ask a friend to calculate the area.

Area of Expertise
Activity Sheet

Name: _____ Class: _____

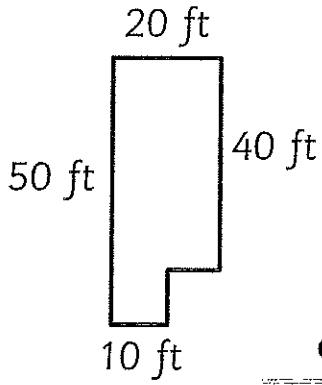
Sten needs to put mulch on the playgrounds.
Help him find the area of each park.

1



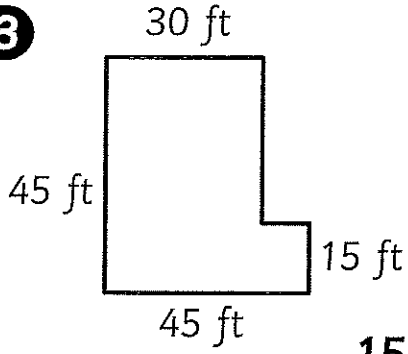
400 ft²

2



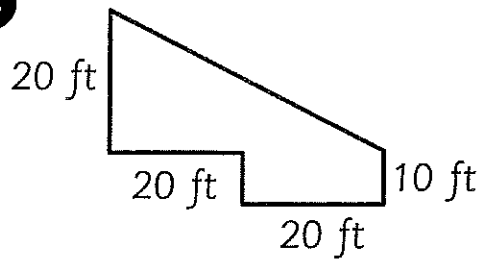
900 ft²

3



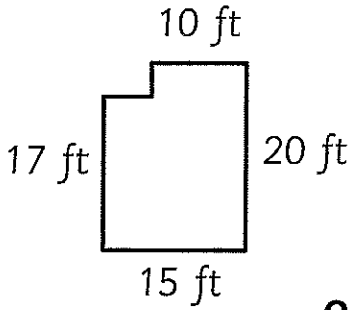
1575 ft²

4



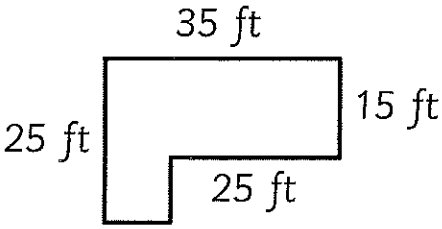
600 ft²

5



285 ft²

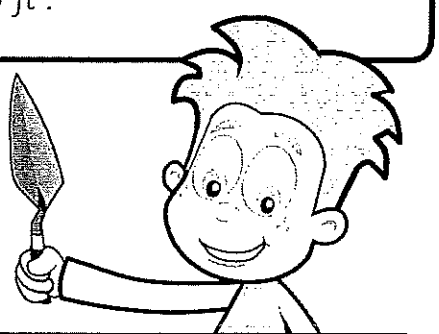
6



625 ft²

To make a soccer field, a park must have an area of over 1,000 ft².
Which park above is larger than 1,000 ft²?

7 **park number 3**



Pigeon Race

EducationCity.com

Stig, Sten, Manu and Klara decided to race their pigeons to see which was the best.
They decided that each pigeon should race three times over different distances.

Race 1. Distance = 80 miles.

1. Stig's pigeon flew 25% of the distance. It flew 20 miles.
2. Manu's pigeon flew 50% of the distance. It flew 40 miles.
3. Sten's pigeon flew 10% of the distance. It flew 8 miles.
4. Klara's pigeon flew 75% of the distance. It flew 60 miles.

Race 2. Distance = 100 miles.

5. Stig's pigeon flew 50% of the distance. It flew 50 miles.
6. Manu's pigeon flew 10% of the distance. It flew 10 miles.
7. Sten's pigeon flew 1% of the distance. It flew 1 miles.
8. Klara's pigeon flew 25% of the distance. It flew 25 miles.

Race 3. Distance = 90 miles.

9. Stig's pigeon flew 5% of the distance. It flew 4.5 miles.
10. Manu's pigeon flew 25% of the distance. It flew 22.5 miles.
11. Sten's pigeon flew 50% of the distance. It flew 45 miles.
12. Klara's pigeon flew 10% of the distance. It flew 9 miles.

How far did each pigeon fly?
Write the totals in the spaces below, starting with the one that flew the farthest.

ⓐ Klara's pigeon came 1st. It flew 94 miles altogether.
ⓑ Stig's pigeon came 2nd. It flew 74.5 miles altogether.
ⓒ Manu's pigeon came 3rd. It flew 72.5 miles altogether.
ⓓ Sten's pigeon came 4th. It flew 54 miles altogether.

Answers: Geometry - Volume

1. C
2. C
3. C
4. --
5. C
6. D
7. D
8. D
9. C
10. D

Explanations: Geometry - Volume

1. The formula for the volume of a rectangular prism is shown below.

$$\text{V} = \text{length} \times \text{width} \times \text{height}$$

To find the volume of the pencil box, substitute the values given in the question into the formula.

$$\begin{aligned}
\text{V} &= \left(9\tfrac{2}{3}\text{ in}\right) \times \left(4\tfrac{1}{5}\text{ in}\right) \times \left(1\tfrac{1}{4}\text{ in}\right) \\
&= \left(\tfrac{29}{3}\text{ in}\right) \times \left(\tfrac{21}{5}\text{ in}\right) \times \left(\tfrac{5}{4}\text{ in}\right) \\
&= \tfrac{3{,}045}{60}\text{ cu in} \\
&= \tfrac{203}{4}\text{ cu in} \\
&= 50\tfrac{3}{4}\text{ cu in}
\end{aligned}$$

2. The formula for the volume of a rectangular prism is shown below.

$$V = l \cdot w \cdot h$$

To find the volume of the rectangular prism, substitute the values given in the question into the formula.

$$\begin{aligned}
V &= \left(\tfrac{1}{2}\text{ in}\right) \cdot \left(\tfrac{2}{3}\text{ in}\right) \cdot \left(\tfrac{1}{2}\text{ in}\right) \\
&= \tfrac{2}{12}\text{ cu in} \\
&= \tfrac{1}{6}\text{ cu in}
\end{aligned}$$

3. The formula for the volume of a rectangular prism is shown below, where B is the area of the base and h is the height of the prism.

$$V = Bh$$

First, find the area of the base, B, of the fish tank. The fish tank has a length of $2\frac{3}{4}$ feet and a width of $1\frac{1}{2}$ feet. So, the area of its base can be calculated as shown below.

$$\begin{aligned} B &= \text{length} \times \text{width} \\ &= 2\tfrac{3}{4}\,\text{ft} \times 1\tfrac{1}{2}\,\text{ft} \\ &= \tfrac{11}{4}\,\text{ft} \times \tfrac{3}{2}\,\text{ft} \\ &= \tfrac{33}{8}\,\text{sq ft} \end{aligned}$$

Next, find the volume, V, of the fish tank. Substitute $B = \frac{33}{8}$ square feet and $h = 2\frac{1}{2}$ feet into $V = Bh$.

$$\begin{aligned} V &= Bh \\ &= \tfrac{33}{8}\,\text{sq ft} \times 2\tfrac{1}{2}\,\text{ft} \\ &= \tfrac{33}{8}\,\text{sq ft} \times \tfrac{5}{2}\,\text{ft} \\ &= \tfrac{165}{16}\,\text{cu ft} \\ &= 10\tfrac{5}{16}\,\text{cu ft} \end{aligned}$$

So, the volume of the fish tank is $10\frac{5}{16}$ **cu ft**.

4. The volume of the prism can be found in two ways.
One way is to first find the measurements of the length, width, and height.

$$\text{length} = 4 \times \tfrac{1}{6}\text{ cm}$$

$$\text{width} = 2 \times \tfrac{1}{6}\text{ cm}$$

$$\text{height} = 3 \times \tfrac{1}{6}\text{ cm}$$

Now, substitute these measurements into the formula of the volume of a prism.

$$\begin{aligned}\text{Volume} &= \left(4 \times \tfrac{1}{6}\text{ cm}\right) \times \left(2 \times \tfrac{1}{6}\text{ cm}\right) \times \left(3 \times \tfrac{1}{6}\text{ cm}\right)\\ &= \tfrac{4}{6}\text{ cm} \times \tfrac{2}{6}\text{ cm} \times \tfrac{3}{6}\text{ cm}\\ &= \tfrac{2}{3}\text{ cm} \times \tfrac{1}{3}\text{ cm} \times \tfrac{1}{2}\text{ cm}\\ &= \tfrac{2}{18}\text{ cubic cm}\\ &= \tfrac{1}{9}\text{ cubic cm}\end{aligned}$$

Another way is to first find the volume of one cube.

$$\tfrac{1}{6}\text{ cm} \times \tfrac{1}{6}\text{ cm} \times \tfrac{1}{6}\text{ cm} = \tfrac{1}{216}\text{ cubic cm}$$

Now, multiply the volume of one cube by the number of cubes.

$$\begin{aligned}\tfrac{1}{216}\text{ cubic cm} \times (4 \times 2 \times 3) &= \tfrac{1}{216}\text{ cubic cm} \times 24\\ &= \tfrac{24}{216}\text{ cubic cm}\\ &= \tfrac{1}{9}\text{ cubic cm}\end{aligned}$$

Therefore, the following each represent the volume of the prism.

$$\left(4 \times \tfrac{1}{6}\text{cm}\right) \times \left(2 \times \tfrac{1}{6}\text{cm}\right) \times \left(3 \times \tfrac{1}{6}\text{cm}\right)$$

$$\tfrac{1}{216}\text{ cubic cm} \times 24$$

$$\tfrac{1}{9}\text{ cubic cm}$$

5. The volume of a prism can be determined using the formula below.

$$\text{Volume} = \text{length} \times \text{width} \times \text{height}$$

Since each cube measures $\frac{1}{4}$ of a centimeter on one side, then the dimensions of the prism are shown below.

$$\text{length} = 5 \times \tfrac{1}{4}\text{ cm}$$

$$\text{width} = 2 \times \tfrac{1}{4}\text{ cm}$$

$$\text{height} = 2 \times \tfrac{1}{4}\text{ cm}$$

Substitute these dimensions into the volume formula to determine the volume of the prism.

$$\begin{aligned}\text{Volume} &= \left(5 \times \tfrac{1}{4}\text{ cm}\right) \times \left(2 \times \tfrac{1}{4}\text{ cm}\right) \times \left(2 \times \tfrac{1}{4}\text{ cm}\right)\\ &= \tfrac{5}{4}\text{ cm} \times \tfrac{2}{4}\text{ cm} \times \tfrac{2}{4}\text{ cm}\\ &= \tfrac{5}{4}\text{ cm} \times \tfrac{1}{2}\text{ cm} \times \tfrac{1}{2}\text{ cm}\\ &= \tfrac{5}{16}\text{ cubic cm}\end{aligned}$$

6. The formula for the volume of a rectangular prism is shown below.

$$\text{V} = \text{length} \times \text{width} \times \text{height}$$

To find the volume of the microwave, substitute the values given in the question into the formula.

$$\begin{aligned}\text{V} &= \left(\tfrac{5}{3}\,\text{ft}\right) \times \left(\tfrac{5}{4}\,\text{ft}\right) \times \left(\tfrac{3}{4}\,\text{ft}\right) \\ &= \tfrac{75}{48}\,\text{cu ft} \\ &= \tfrac{25}{16}\,\text{cu ft} \\ &= 1\tfrac{9}{16}\,\text{cu ft}\end{aligned}$$

7. The volume of a rectangular prism can be found using the formula below.

$$\text{Volume} = \text{length} \times \text{width} \times \text{height}$$

The volume of the prism can be found in two ways - either by multiplying the volume of each cube by the number of cubes or by using the volume formula.

To find the volume of the rectangular prism the first way, find the volume of one cube.

$$\tfrac{1}{5}\,\text{in} \times \tfrac{1}{5}\,\text{in} \times \tfrac{1}{5}\,\text{in} = \tfrac{1}{125}\,\text{cu in}$$

Next, count the number of cubes inside the prism. Since there are 3 layers of cubes and each layer has 10 cubes, the total number of cubes inside the prism is calculated as shown below.

$$3 \times 10 = 30$$

Now, multiply the volume of one cube by the number of cubes.

$$\begin{aligned}\tfrac{1}{125}\,\text{cu in} \times 30 &= \tfrac{30}{125}\,\text{cu in} \\ &= \tfrac{6}{25}\,\text{cu in}\end{aligned}$$

The other way to find the volume of a rectangular prism is to find the length, width and height of the prism by multiplying the number of cubes for each measurement by the length of one cube.

$$\begin{aligned}\text{length} &= 5 \times \tfrac{1}{5}\,\text{in} \\ \text{width} &= 2 \times \tfrac{1}{5}\,\text{in} \\ \text{height} &= 3 \times \tfrac{1}{5}\,\text{in}\end{aligned}$$

Now, substitute these measurements into the formula of the volume of a prism.

$$\begin{aligned}\text{Volume} &= \left(5 \times \tfrac{1}{5}\,\text{in}\right) \times \left(2 \times \tfrac{1}{5}\,\text{in}\right) \times \left(3 \times \tfrac{1}{5}\,\text{in}\right) \\ &= 1\,\text{in} \times \tfrac{2}{5}\,\text{in} \times \tfrac{3}{5}\,\text{in} \\ &= \tfrac{6}{25}\,\text{cu in}\end{aligned}$$

The volume of the prism found by both the methods is the same.

So, the volume of the prism is $\frac{6}{25}$ **cu in**.

8. The volume of a rectangular prism can be found using the formula below.

$$\text{Volume} = \text{length} \times \text{width} \times \text{height}$$

The volume of the prism can be found in two ways - either by multiplying the volume of each cube by the number of cubes or by using the volume formula.

To find the volume of the rectangular prism the first way, find the volume of one cube.

$$\frac{1}{2}\,\text{ft} \times \frac{1}{2}\,\text{ft} \times \frac{1}{2}\,\text{ft} = \frac{1}{8}\,\text{cu ft}$$

Next, count the number of cubes inside the prism. Since there are 4 layers of cubes and each layer has 24 cubes, the total number of cubes inside the prism is calculated as shown below.

$$4 \times 24 = 96$$

Now, multiply the volume of one cube by the number of cubes.

$$\begin{aligned}\frac{1}{8}\,\text{cu ft} \times 96 &= \frac{96}{8}\,\text{cu ft} \\ &= 12\,\text{cu ft}\end{aligned}$$

The other way to find the volume of a rectangular prism is to find the length, width and height of the prism by multiplying the number of cubes for each measurement by the length of one cube.

$$\text{length} = 8 \times \frac{1}{2}\,\text{ft}$$

$$\text{width} = 3 \times \frac{1}{2}\,\text{ft}$$

$$\text{height} = 4 \times \frac{1}{2}\,\text{ft}$$

Now, substitute these measurements into the formula of the volume of a prism.

$$\begin{aligned}\text{Volume} &= \left(8 \times \frac{1}{2}\,\text{ft}\right) \times \left(3 \times \frac{1}{2}\,\text{ft}\right) \times \left(4 \times \frac{1}{2}\,\text{ft}\right) \\ &= 4\,\text{ft} \times \frac{3}{2}\,\text{ft} \times 2\,\text{ft} \\ &= 12\,\text{cu ft}\end{aligned}$$

The volume of the prism found by both the methods is the same.

So the volume of the prism is **12 cu ft.**

9. The volume of a prism can be determined using the formula below.

$$\text{Volume} = \text{length} \times \text{width} \times \text{height}$$

Since each cube measures $\frac{1}{4}$ of an inch on one side, then the dimensions of the prism are shown below.

$$\text{length} = 3 \times \frac{1}{4}\,\text{in}$$

$$\text{width} = 2 \times \frac{1}{4}\,\text{in}$$

$$\text{height} = 2 \times \frac{1}{4}\,\text{in}$$

Substitute these dimensions into the volume formula to determine the volume of the prism.

$$\begin{aligned}\text{Volume} &= \left(3 \times \frac{1}{4}\,\text{in}\right) \times \left(2 \times \frac{1}{4}\,\text{in}\right) \times \left(2 \times \frac{1}{4}\,\text{in}\right) \\ &= \frac{3}{4}\,\text{in} \times \frac{2}{4}\,\text{in} \times \frac{2}{4}\,\text{in} \\ &= \frac{3}{4}\,\text{in} \times \frac{1}{2}\,\text{in} \times \frac{1}{2}\,\text{in} \\ &= \frac{3}{16}\,\text{cubic in}\end{aligned}$$

10. The formula for the volume of a rectangular prism is shown below.

$$V = l \cdot w \cdot h$$

To find the volume of the rectangular prism, substitute the values given in the question into the formula.

$$\begin{aligned} V &= \left(\tfrac{1}{2}\text{ cm}\right) \cdot \left(\tfrac{1}{4}\text{ cm}\right) \cdot \left(\tfrac{4}{5}\text{ cm}\right) \\ &= \tfrac{4}{40}\text{ cu cm} \\ &= \tfrac{1}{10}\text{ cu cm} \end{aligned}$$

Bumper Bash

Activity Sheet

Name: _____ Class: _____

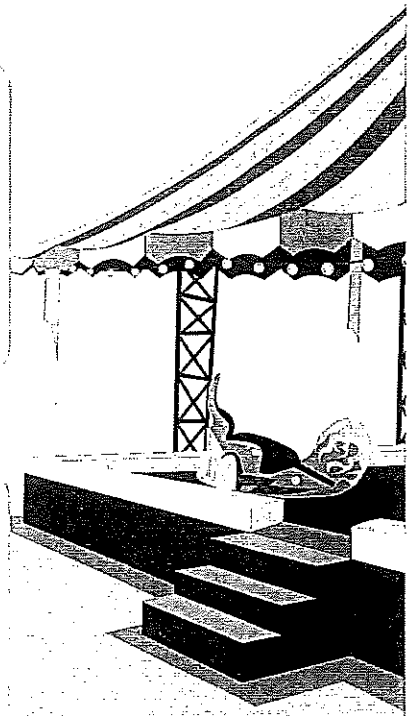
Calculate what number each letter represents in these questions.
In the box, explain how you found the answer.

1 $12b = 24$ $b =$ 2

$$12b = 24$$
$$\frac{12b}{12} = \frac{24}{12}$$
$$b = 2$$

2 $c + 20 = 30$ $c =$ 10

$$c + 20 = 30$$
$$c + 20 - 20 = 30 - 20$$
$$c = 10$$



3 $d - 25 = 40$ $d =$ 65

$$d - 25 = 40$$
$$d - 25 + 25 = 40 + 25$$
$$d = 65$$

Here is an unusual square.
It is unusual because the numbers in add up to 24 in all directions.
Replace the letters with numbers to make it correct.

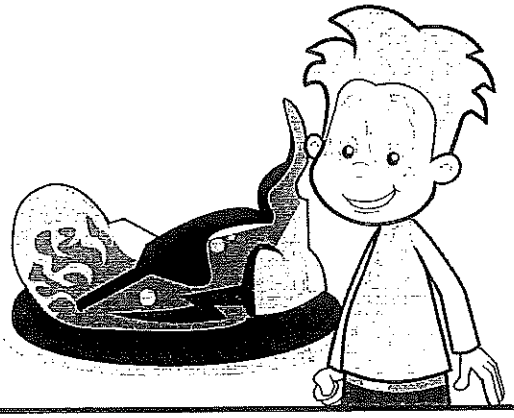
4

7	*a*	5
6	8	*b*
c	4	9

$a =$ 12

$b =$ 10

$c =$ 11



Hockey Stars

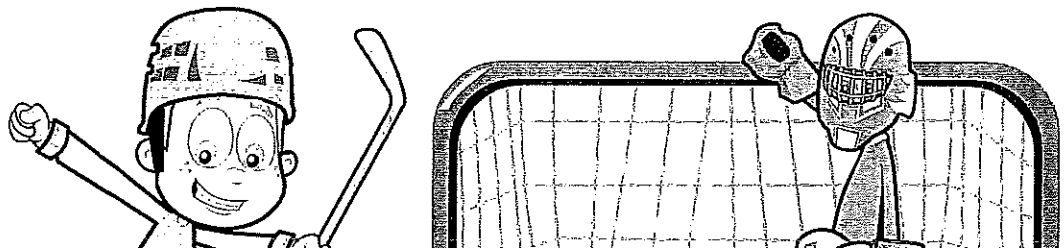
Activity Sheet

Name: _____ Class: _____

Algebra Hockey: A two player game.

- Cut out the cards below and place them face down on a table.
- Take turns picking up two cards.
- If they are equivalent the player scores a goal and keeps the cards.
- If they are not equivalent, and the cards go back on the table.
- The player that scores the most goals wins.

$8n$	$20 + 3n - 20 + 5n$
$5n - 30$	$5(n - 6)$
$6n + 400 - 3n + 40$	$3n + 440$
$5n + 40$	$5(n + 8)$
$3n + 30$	$3(n + 10)$
$4n$	$n + n + n + n$
$9(n - 40)$	$9n - 360$
$7n + 8$	$n + n + 10 + 5n - 2$
$3n + 12 + n - 3$	$4n + 9$

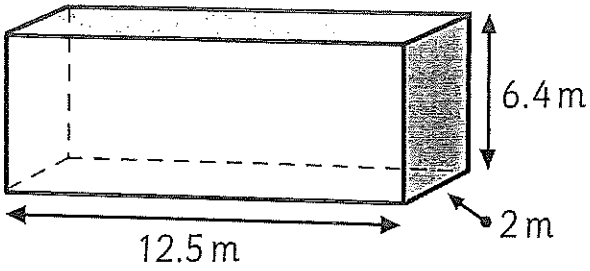


Safety Net
Activity Sheet

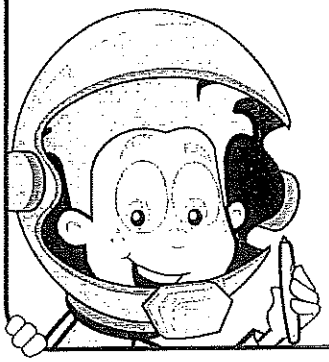
Name: _____ Class: _____

Draw a net for and find the surface area of each 3-D figure.
Show your work.

1



rectangular prism



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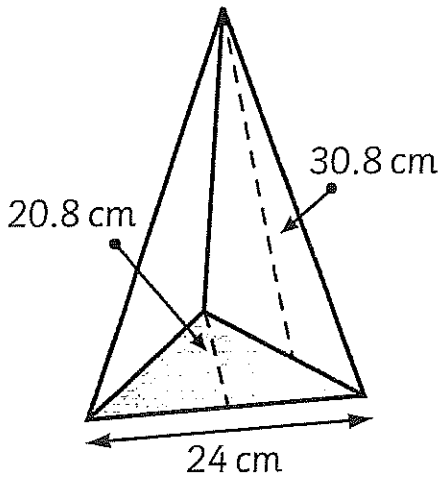


triangular pyramid

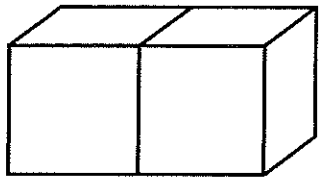
Sten, We Have a Polygon

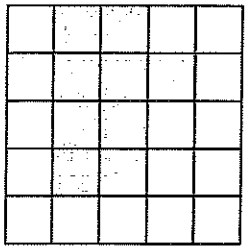
Activity Sheet

Name: _____ Class: _____

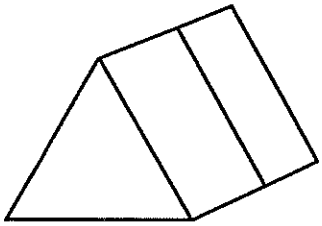
Draw a net for each shape using the grid.

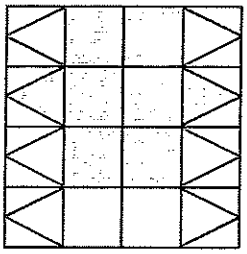
1





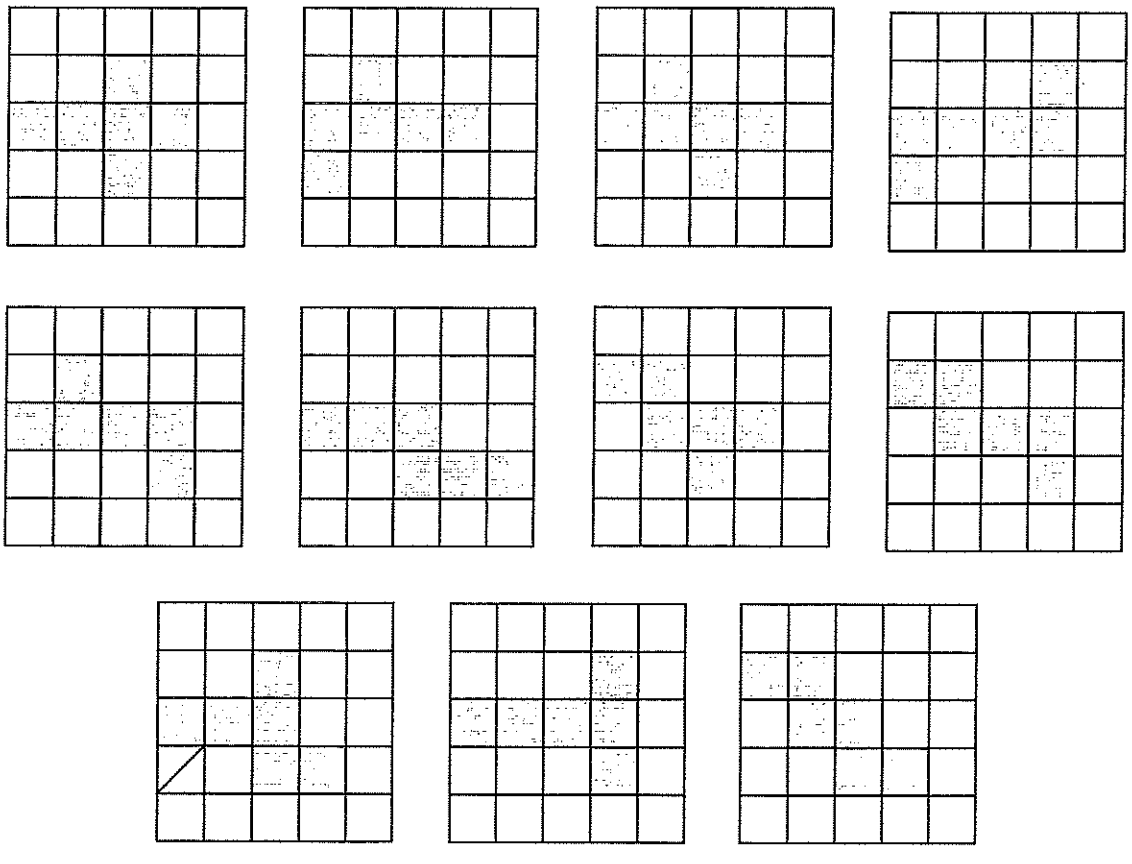
Sample answers





There are 11 different nets that will form a cube.
How many can you make?
Shade in the nets on the grid below.
One has been done for you.

2



Tempo Tantrum

Activity Sheet

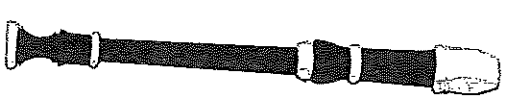
Name: _____ Class: _____

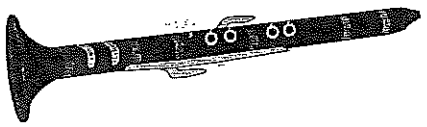
Solve the problems.

1. What is 28% of 50? **14**
2. 28% of what number is 21? **75**
3. 60% of what number is 36? **60**
4. What is 55% of 160? **88**
5. 56% of what number is 14? **25**
6. What is 35% of 60? **21**
7. What is 40% of 130? **52**
8. What is 18% of 150? **27**
9. 5% of what number is 6? **120**
10. 30% of what number is 48? **160**
11. What is 60% of 15? **9**
12. 32% of what number is 40? **125**

13. There are 120 musicians in the orchestra.
20% of the orchestra is in the woodwinds section.
How many musicians are in the woodwinds section?

0.20 x 120 = n, n = 24 musicians





14. 30% of the brass section play trumpet.
If 6 musicians play trumpet, how many musicians are in the brass section?

0.30 × n = 6, n = 20 musicians