

AN EVIL TWIN



By: Caitlin, Maya, and Elliot

Caitlin

Good job! Shrek, name the formula for the area and circumference.

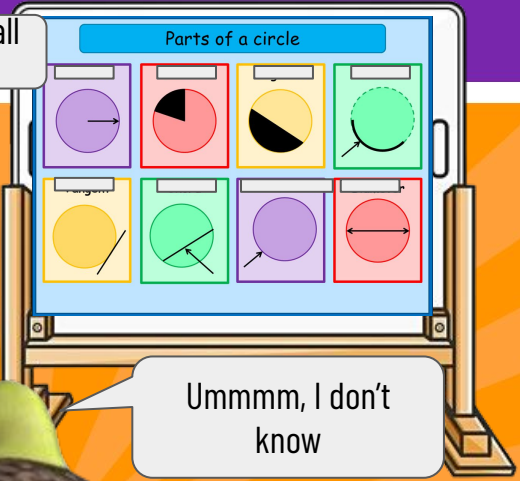
Can anyone name all of these parts?

Ok. Name all of them.

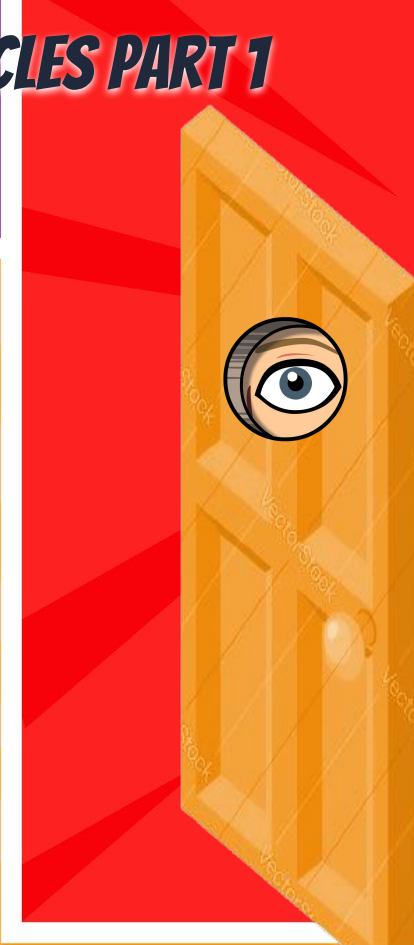
THE ADVENTURES OF CIRCLES PART 1

Radius, sector, segment, arc, tangent, chord, circumference, area, and diameter.

We can together, using the power of friendship!



Ummmm, I don't know



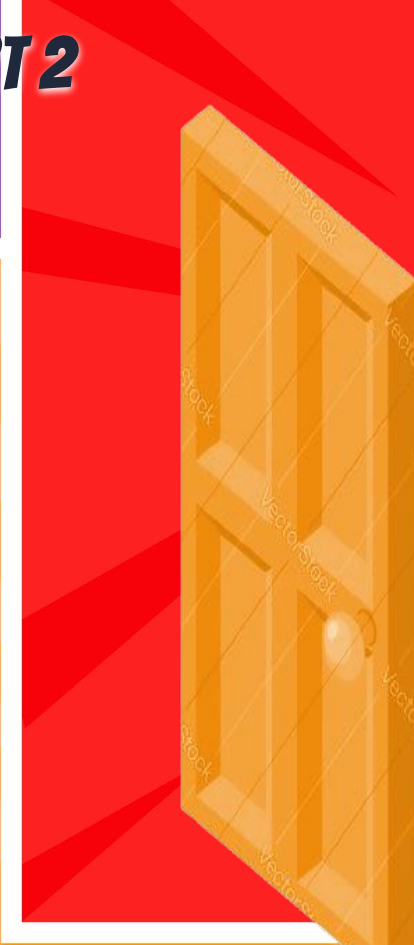
THE ADVENTURES OF CIRCLES PART 2

YOU DON'T KNOW THE ANSWER!!!!


Come to the hall NOW!!!



no?



THE ADVENTURES OF CIRCLES PART 3



I AM SO DISAPPOINTED
IN YOU. I AM SENDING
YOU TO SPACE!!

I AM MS.FREEMAN

I want
ms.freeman
back.

NO! YOU'RE EVIL MS.
FREEMAN!!!



Caitlin

THE ADVENTURES OF CIRCLES PART 2

Ok, we have dealt with the weak link.

NOW NAME THE FORMULA FOR AREA AND CIRCUMFERENCE. We plug in numbers to this formula to find the area or circumference, so it is important you know what to do.

$C = 3 \pi r$ and
 $A = \pi r^2$

WRONG!!! IT IS $C = 2 \pi r$. I AM SENDING YOU TO SPACE.



ya

She sent u
guys here too



THE ADVENTURES OF CIRCLES PART 3

Here is your quiz. I will say the answer once you are done



Sorry about that.







What happens if we get a problem wrong?

If you get it wrong you just have to see me at tutorial to work through the problems we got wrong. What do you mean again? Was my evil twin here again?

Circumference and Area of a Circle

Name: _____

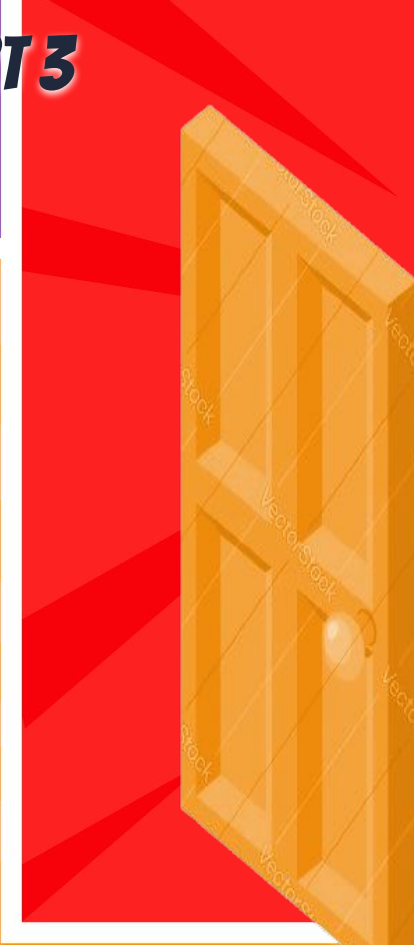
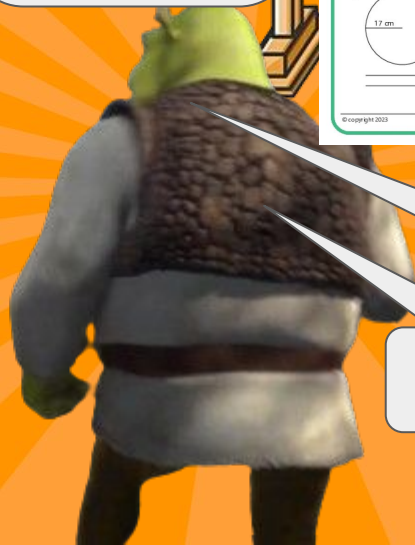
Calculate the circumference and area of each circle.

1)  _____	2)  _____
3)  _____	4)  _____
5)  _____	6)  _____

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Do we get sent to space again?

Yes



THE ADVENTURES OF CIRCLES PART 3

You guys are speedy. Good job!



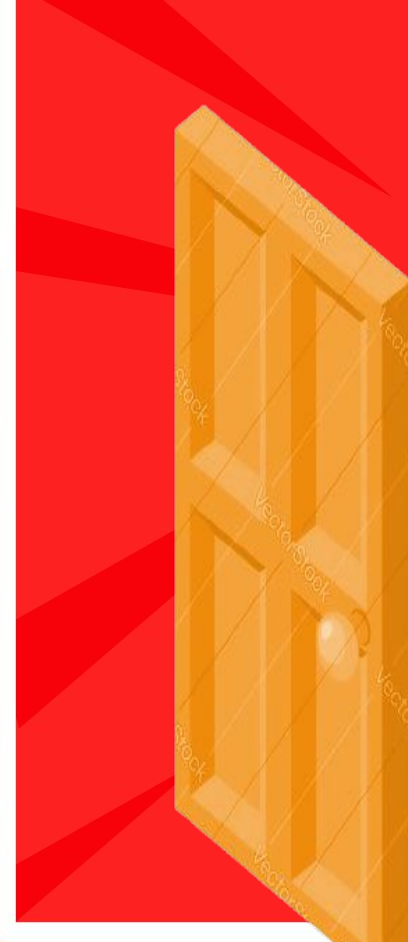
I will post the answer key on Blackbaud, please have your corrections done by next class.

OK

Worksheet titled "Circumference and Area of a Circle" with a "Name: _____" field. The instructions are "Calculate the circumference and area of each circle." There are six problems, each with a circle and a diameter line:

- 1) Circle with diameter 8 ft. Below it are two blank lines for the answer.
- 2) Circle with diameter 19 m. Below it are two blank lines for the answer.
- 3) Circle with diameter 14 yd. Below it are two blank lines for the answer.
- 4) Circle with diameter 18 m. Below it are two blank lines for the answer.
- 5) Circle with diameter 17 cm. Below it are two blank lines for the answer.
- 6) Circle with diameter 10 ft. Below it are two blank lines for the answer.

At the bottom of the worksheet, it says: © copyright 2023 For Personal and Educational Use Only <http://t12.net/worksheets.com>



THE NEXT DAY

THE ADVENTURES OF CIRCLES PART 4

Dora see me after class, same with Shrek.



I did not

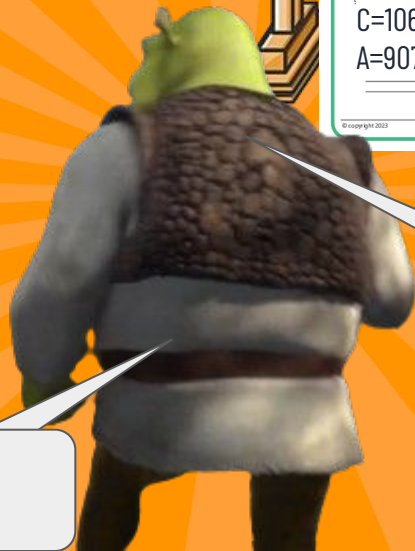


Ok, here is the answer is also key on the board. Who did the corrections?

I did



Uh Oh!



I did not

Circumference and Area of a Circle

Name: _____

Calculate the circumference and area of each circle

$C=25.23$ $A=50.27$	$C=119.38$ $A=1134.11$
$C=87.96$ $A=615.75$	$C=113.1$ $A=1017.88$
$C=106.81$ $A=907.92$	$C=31.42$ $A=78.54$

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I wonder
what we will
learn next

I didn't know
Ms.Freeman had
an evil twin

Boots why are you here?

I failed a quiz



I am very proud of you guys conquering circles. Now we are going to learn trig! I made a packet explaining it. Read it, and please tell me if you have any questions.

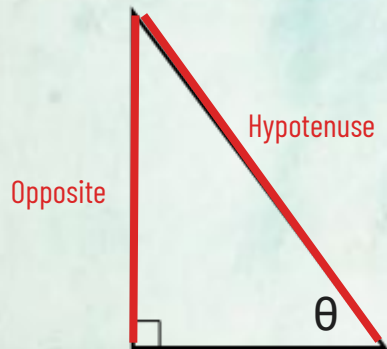
THE ADVENTURES OF TRIG PART 1

Trigonometry is a branch of math that deals with relationships between angles and side lengths of triangles.



THE ADVENTURES OF TRIG PART 3

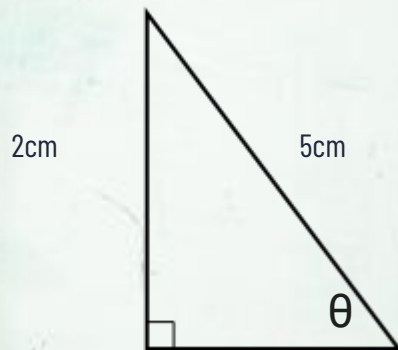
Sine is the trigonometric function for an acute angle in a right triangle is the ratio of the side opposite the angle to the hypotenuse



$$\sin \theta_{(\text{theta})} = \frac{\text{Opposite}}{\text{Hypotenuse}}$$

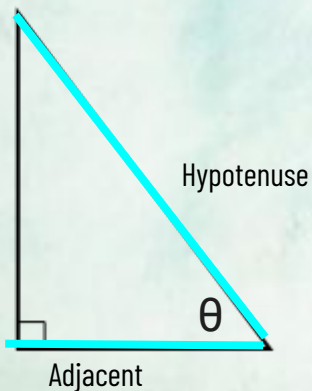
SOH

PRACTICE PROBLEM



THE ADVENTURES OF TRIG PART 4

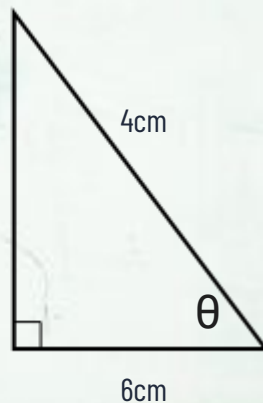
Cosine is the trigonometric function that is the ratio between the side next to an acute angle in a right triangle and the hypotenuse



$$\cos \theta_{(\text{theta})} = \frac{\text{Adjacent}}{\text{Hypotenuse}}$$

CAH

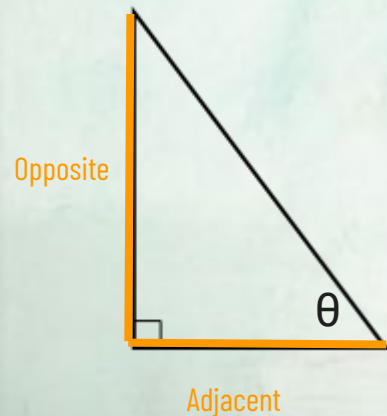
PRACTICE PROBLEM



THE ADVENTURES OF TRIG PART 5

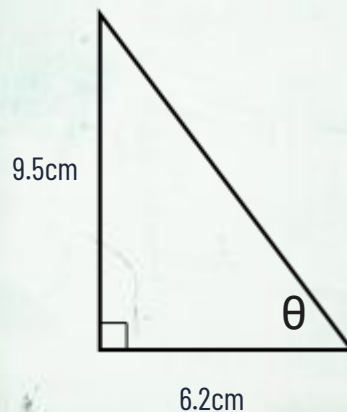
Tangent is the ratio of the length of the opposite side to the length of the adjacent side.

$$\tan \theta_{(\text{theta})} = \frac{\text{Opposite}}{\text{Adjacent}}$$



TOA

PRACTICE PROBLEM



THE ADVENTURES OF TRIG PART 6

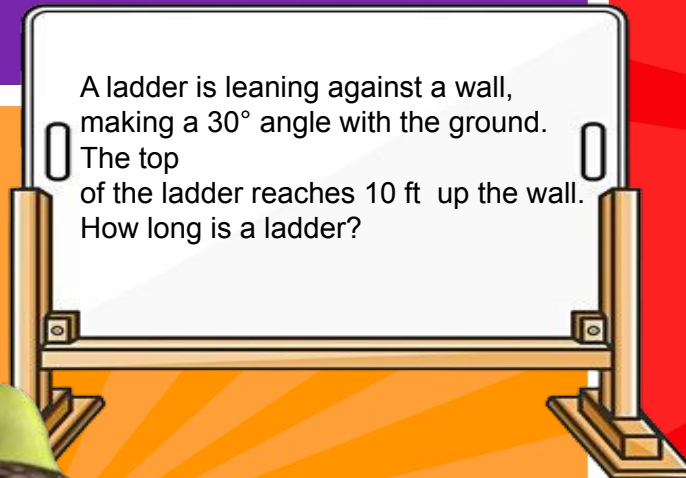
Does that make sense?
To test your
understanding, here is a
word problem. Work as a
group.



We don't get
this.



A ladder is leaning against a wall,
making a 30° angle with the ground.
The top
of the ladder reaches 10 ft up the wall.
How long is a ladder?



THE ADVENTURES OF TRIG PART 7

Caitlin

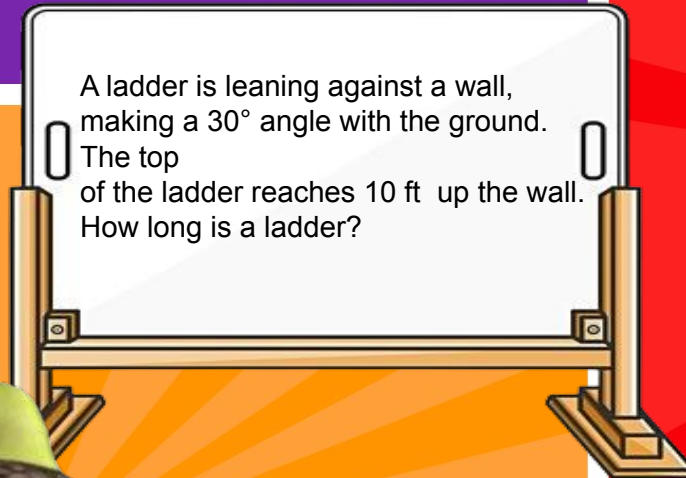
YOU DON'T GET THIS!!
BYE BYE
EEEEEEEEEEEEEEEEEEEE!!!!
!!!!!!!!!!!!!!!!!!!!!!



We don't get this.



A ladder is leaning against a wall,
making a 30° angle with the ground.
The top
of the ladder reaches 10 ft up the wall.
How long is a ladder?





WORST TIMING EVER
BOOTS!!

Wait I get the
problem now!

- The angle is 30° .
- The opposite side (height of the ladder on the wall) is 10 feet.
- The hypotenuse (the length of the ladder) is what we want to find.

$$\sin(30^\circ) = \frac{10}{\text{hypotenuse}}$$

From trigonometry, $\sin(30^\circ) = 0.5$. So:

$$0.5 = \frac{10}{\text{hypotenuse}}$$

Solve for the hypotenuse:

$$\text{hypotenuse} = \frac{10}{0.5} = 20 \text{ feet.}$$

Answer:

The ladder is 20 feet long.

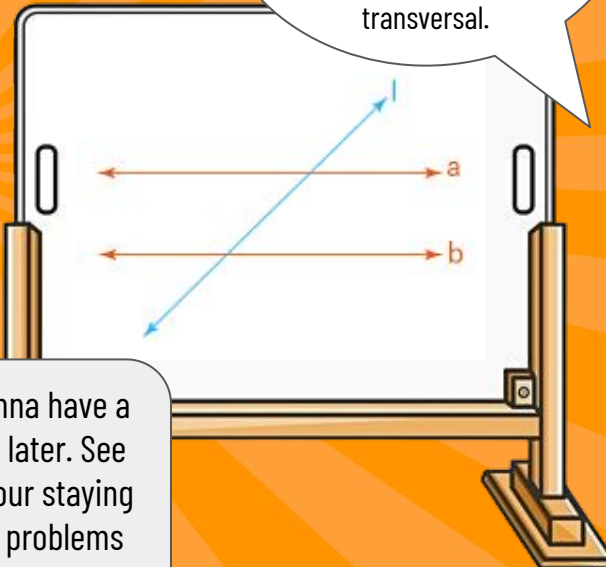
THE ADVENTURES OF PARALLEL LINES CUT BY TRANSVERSALS PART 1



I don't know. I don't wanna be here.

I think I know it! Lines a & b are parallel, and line l makes it transversal.

Ya that sounds about right.



Okay class! Today we are going to start with a simple problem to get our brains going! Perry, please tell me which are the parallel lines and which makes the transversal.

CORRECT Boots!

Perry... I'm gonna have a word with you later. See me at lunch, your staying in to do some problems with me





Perry Perry Perry.
Just because you're
my favorite, I will
give you a simpler
problem. But... YOUR
STILL IN TROUBLEEE



Okay...!

THE ADVENTURES OF PARALLEL LINES CUT BY TRANSVERSALS PART 2

Welllll, we would do $60=8x-4$
So, the answer would
beeeee
 $x=8$



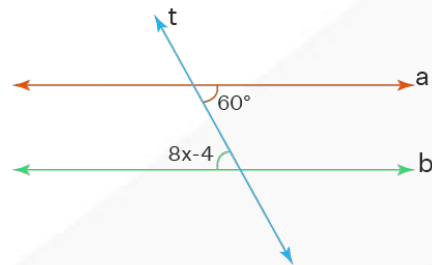
Bro, let's just move
on and get this
over with.

Hello Perry... I hope your having a
good day, because you will not be
anymore. Solve this problem for
me, have fun...!



Wow Perry... Surprisingly, you got
that correct. Would you like to tell
me how you did it? Or should we
move on to the next problem?

Solve for x:



THE ADVENTURES OF PARALLEL LINES CUT BY TRANSVERSALS PART 3

Um, so you would do
 $60+x=180$
After you have your
equation, you would
subtract 60 from
both sides, and then
 $x=120$



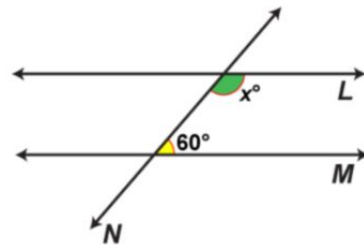
Great

Oh good job
Perry! You are
now allowed to
go back with
the rest of the
class.



Okay Perry,
since you seem
to know
everything. Tell
me... what is x ,
and how do we
find it?

Solve for x :



THE ADVENTURES OF PARALLEL LINES CUT BY TRANSVERSALS PART 4

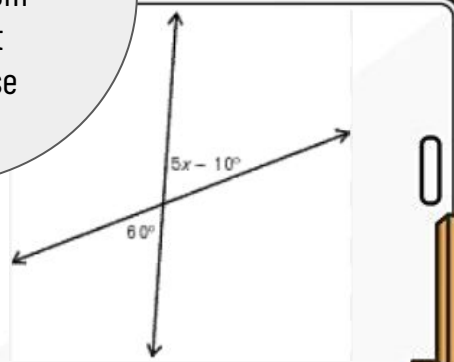
Sure. I'll go, so it would be $5x=70$. Then when you divide by 5 on both sides, it would be $x=14$.

Hello again

So, in order to solve this problem, we would have to do $5x-10=60$. From there, I'll let someone else finish.

Correct, good teamwork class!

Welcome back Perry! So, I have our last problem, before we change to a new topic! I would like Donko to answer it. Donko, what do you think the answer is.

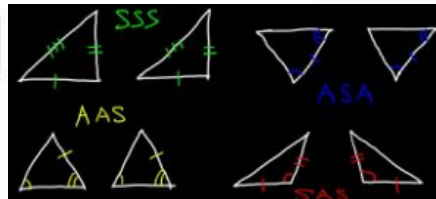


THE ADVENTURES OF CONGRUENT TRIANGLES PART 1

SSS stands for side-side-side. If 3 sides of one triangle are congruent to 3 sides of the second triangle, then they're congruent.

I will answer!

Congruent triangle theorems



Go ahead Boots!

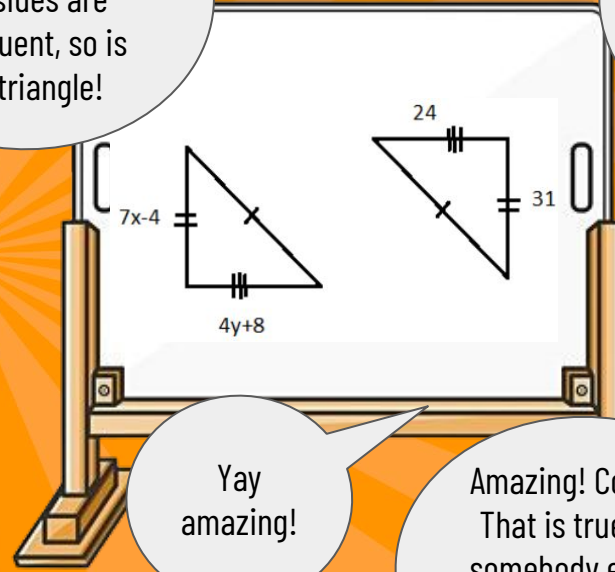
Okay class, now we are going to start a new topic. Let's take a break with transversals, and let's move to congruent triangles. These are the triangle congruence theorems. Can anyone name SSS in their own words?

THE ADVENTURES OF CONGRUENT TRIANGLES PART 2

Yes! They are!
They are congruent,
using SSS -
Side-Side-Side.



We know using
SSS, stating that
if 3 sides are
congruent, so is
the triangle!



Fantastic!
Now, let's
figure out if
these are
congruent



Yay
amazing!

Amazing! Correct!
That is true. Can
somebody explain
how you found
that?

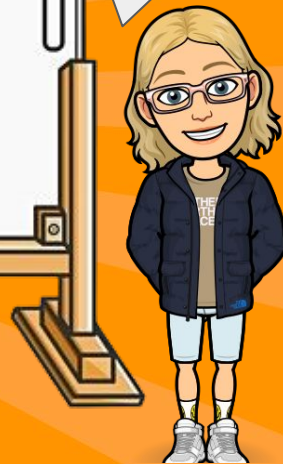
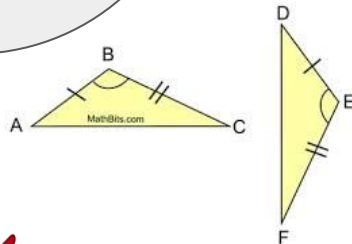
THE ADVENTURES OF COMPLEX PLANES PART 3

I know I know I know the answer!

Yeah so I'm answering, not you Boots.

DONK0000! That is completely disrespectful. Meet me in the other room. We will be answering another problem...

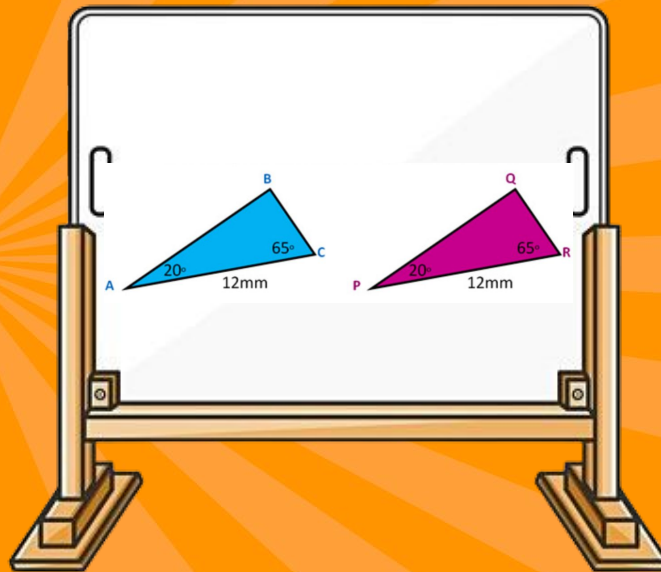
Guys! Do these triangles look congruent to you, if so, what's your proof, and what theorem is used?



THE RULES OF CONGRUENT TRIANGLES PART 4

AAS, it would be AAS, because they are all either corresponding sides, or corresponding angles.

Tell me. What is this. Start talking Donko.



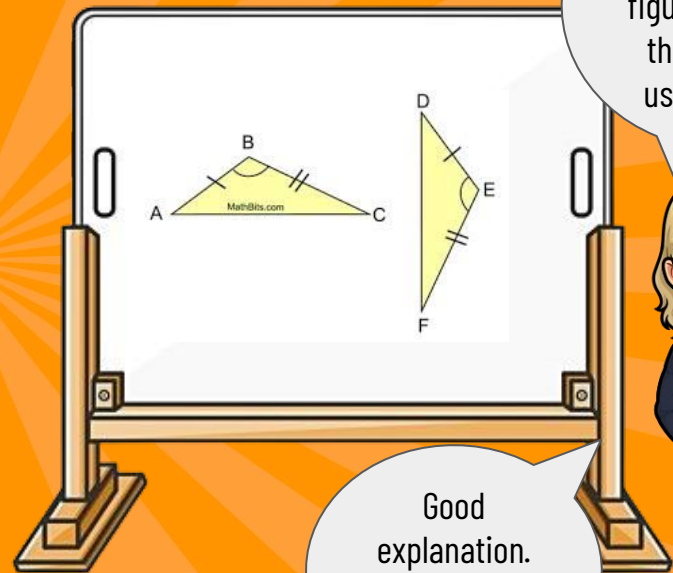
Yeah sure, I guess that works. Good job, you may go back to the class, as they finish the last problem of the day.

THE ADVENTURES OF CONGRUENT TRIANGLES PART 5

We would use SAS for our triangle congruence theorem!

Thanks, I will let Boots answer this, because he seems excited.

Welcome back!
Now, let's figure out what the theorem used here is.



Good explanation.
That is correct!

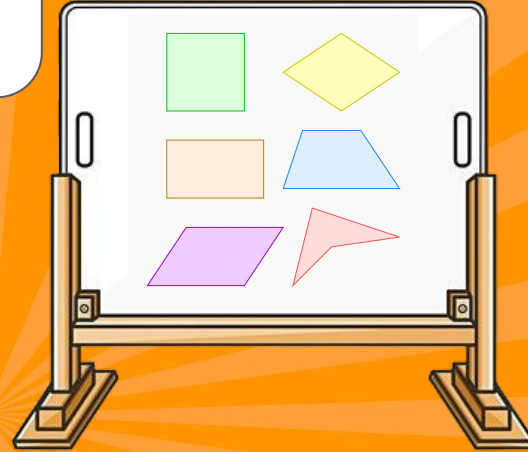




Bye class! Have a nice rest of your day! Don't forget your theorems!

THE ADVENTURES OF CHARACTERISTICS OF QUADRILATERALS

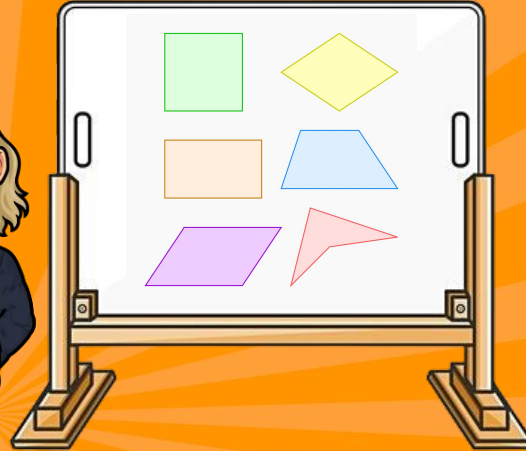
Hello Class, today we will be talking about quadrilaterals!



THE ADVENTURES OF CHARACTERISTICS OF QUADRILATERALS

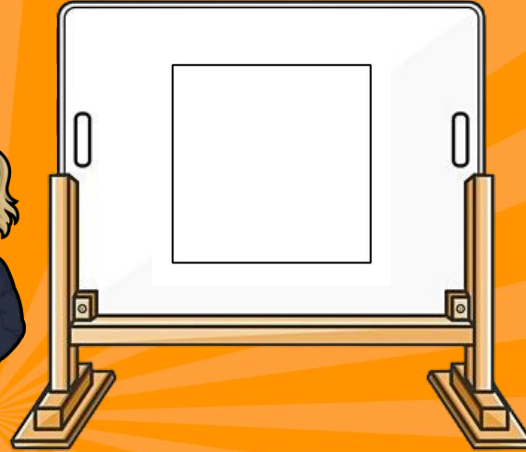
A quadrilateral is any shape with four sides. But they come in many forms.

Uhh what is that?



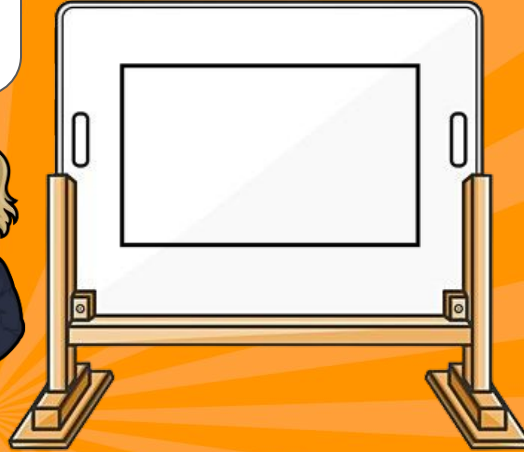
THE ADVENTURES OF CHARACTERISTICS OF QUADRILATERALS

First, there is a square. A square has 4 equal sides and 4 right angles.



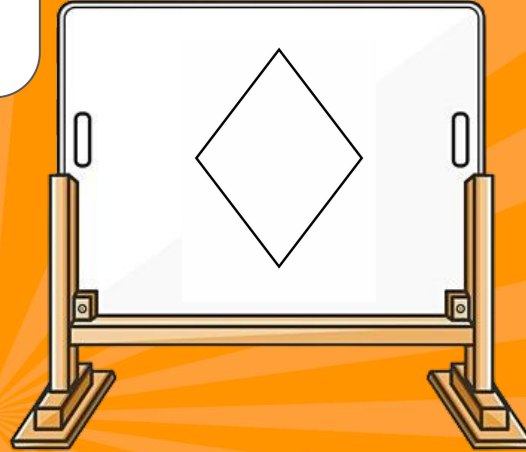
THE ADVENTURES OF CHARACTERISTICS OF QUADRILATERALS

Next, we have the rectangle. It has 4 right angles and there are two sets of equal lines.



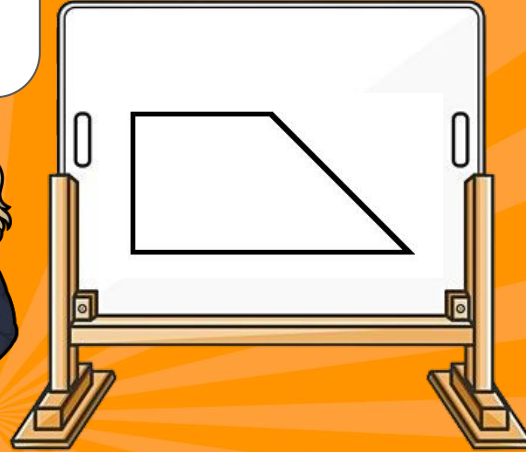
THE ADVENTURES OF CHARACTERISTICS OF QUADRILATERALS

This is a rhombus.
Four equal sides, but
no right angles.



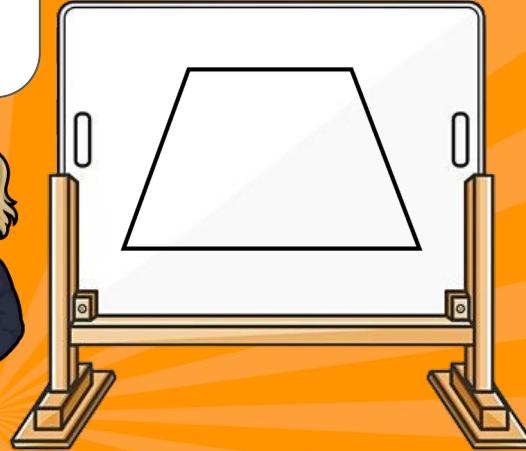
THE ADVENTURES OF CHARACTERISTICS OF QUADRILATERALS

This is a regular trapezium. This one has a right angle, no same sides, and no parallel lines.



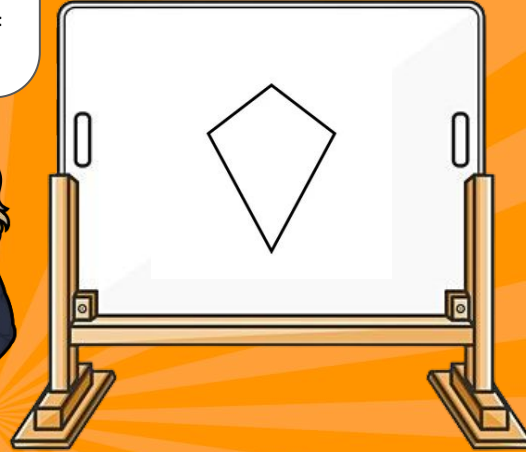
THE ADVENTURES OF CHARACTERISTICS OF QUADRILATERALS

However, we also have an isosceles trapezium. There is one set of parallel lines, but the two sides are equal.



THE ADVENTURES OF CHARACTERISTICS OF QUADRILATERALS

Here, we have a kite.
This is two triangles,
one smaller and one longer,
put together.
There are two sets of
parallel lines.



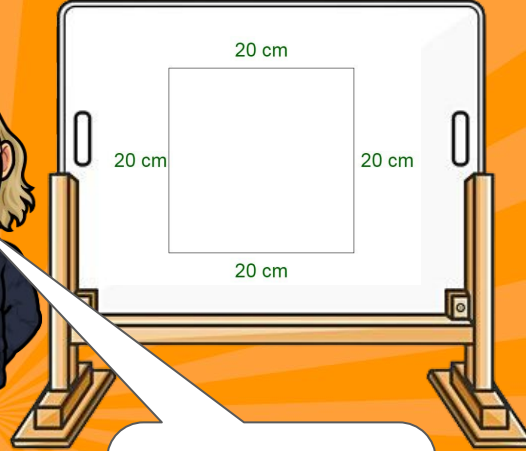
THE ADVENTURES OF CHARACTERISTICS OF QUADRILATERALS

Well, to find the area of a square, you multiply the length and height. And since those are both 20cm, the area is 400cm^2 .

Can anyone tell me the area of this square?

20 cm
20 cm
20 cm
20 cm

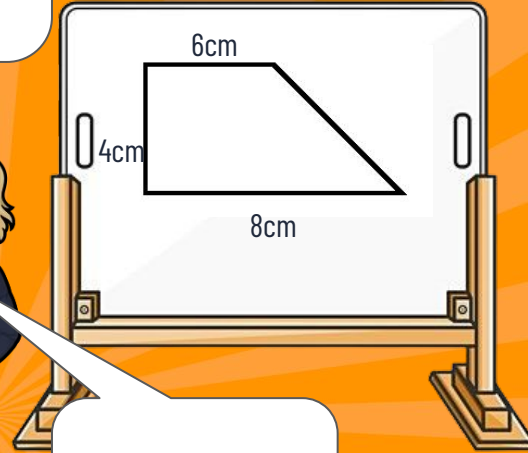
Good job, Bugs!



THE ADVENTURES OF CHARACTERS OF QUADRILATERALS

Erm, actually, the formula for the area of a trapezoid is $A = \frac{a+b}{2}h$, and the base is 8 and the height is 4 and the a is 6 so the area would be 24.

Now for a harder problem. Who can tell me the area of this trapezoid?

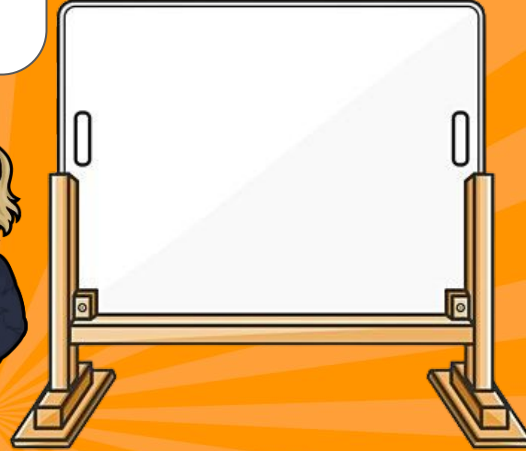


Very good, perry.



THE ADVENTURES OF CHARACTERISTICS OF QUADRILATERALS

Good job, class! We're very fortunate Evil Ms. Freeman didn't show up.

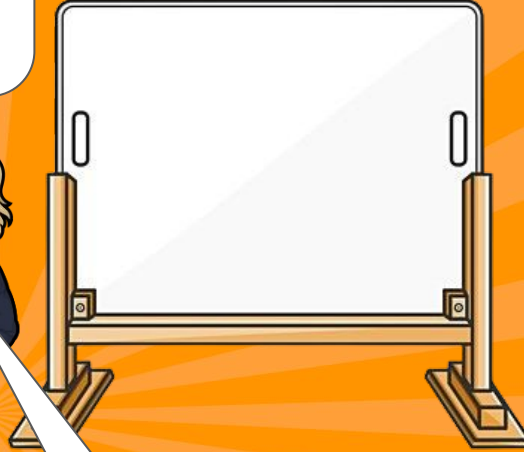


THE ADVENTURES OF ANGLES IN POLYGONS

Can anyone tell me
how many degrees
total are in *any*
triangle?

Um...
 180° ?

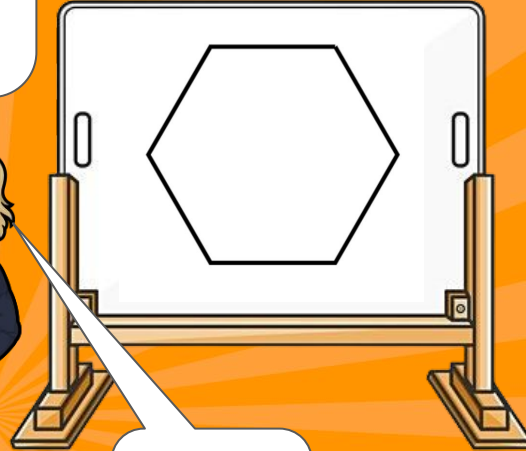
Correct!



THE ADVENTURES OF ANGLES IN POLYGONS

Now, can anyone tell me the sum formula for internal angles?

It's $(n-2)180^\circ$, obviously.



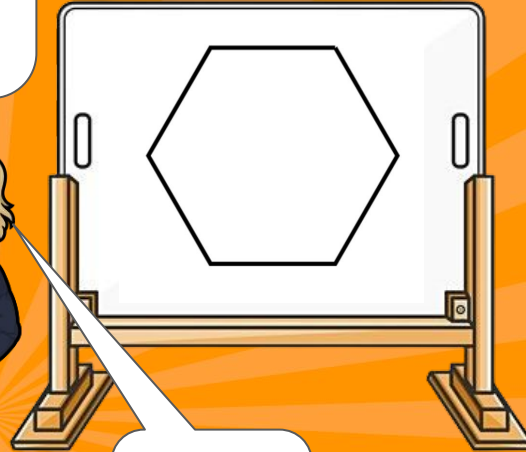
Correct as always, Perry.

THE ADVENTURES OF ANGLES IN POLYGONS

Erm, actually, a hexagon has six sides so $n=6$. If you apply the sum formula for interior angles, then you get $(6-2)180$ which is 720° .

Since you're so smart, what would be the sum of the interior angles of this hexagon be, Perry?

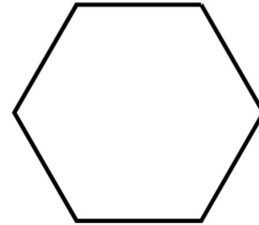
Correct, as always.



THE ADVENTURES OF ANGLES IN POLYGONS

Erm, actually, the sum of the exterior angles of any polygon is 360° so the answer is 360° .

And what would be the sum of the exterior angles of this hexagon?



Correct.



THE ADVENTURES OF ANGLES IN POLYGONS

Erm, actually, the formula is $((n-2)180^\circ)/n$ so it's $720/6$ which is 120° .

Now how would I find the measure of *one* of the angles?

sigh
correct
again.

