

Math Review Packet

~~XXXXXXXXXX~~ Expectations:

1. ALL of your work should be:

-ORGANIZED

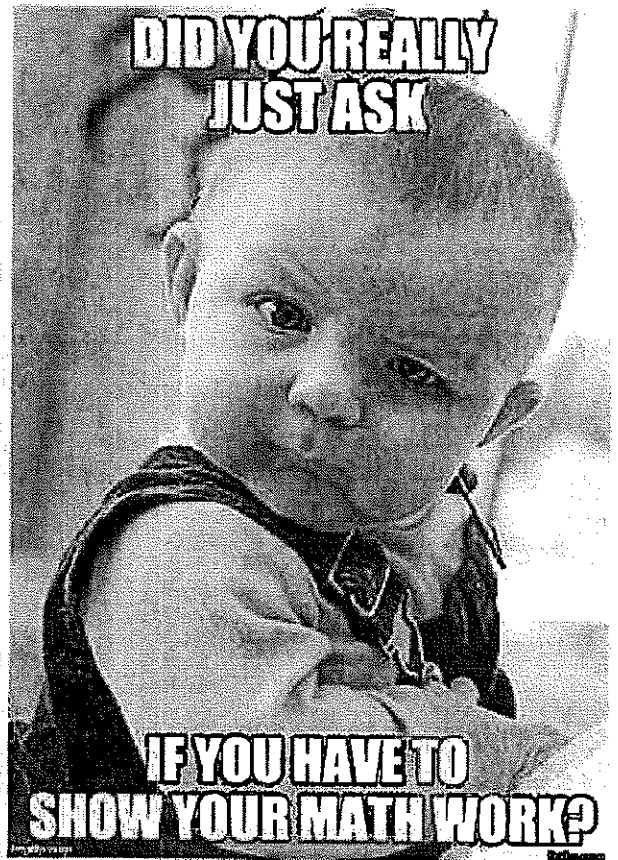
-NEAT

*****-On a separate piece of paper to prove all answers correct AND incorrect.

2. The only work that should be in the packet are circled answer choices.

3. I will be checking all of your work and answers when you get back!

4. This WILL be a TEST grade!



1

An equation is shown below.

$$12 - 9 + c = 12$$

What value of c makes the equation true?

- A 0
- B 3
- C 9
- D 12

2

Kate has a coin collection. She keeps 7 of the coins in a box, which is only 5% of her entire collection. What is the total number of coins in Kate's coin collection?

- A 12
- B 14
- C 120
- D 140

3

What is the greatest common factor of 36 and 90?

- A 6
- B 18
- C 36
- D 180

GO ON

4

The relationship between Robert's age, r , and Julia's age, j , can be represented by the equation shown below.

$$r = j + 3$$

Which table of values represents the relationship between Robert's age and Julia's age?

POSSIBLE AGES

A

Robert's Age, r (years)	Julia's Age, j (years)
9	12
15	18
21	24

POSSIBLE AGES

C

Robert's Age, r (years)	Julia's Age, j (years)
9	6
15	12
21	18

POSSIBLE AGES

B

Robert's Age, r (years)	Julia's Age, j (years)
9	3
15	5
21	7

POSSIBLE AGES

D

Robert's Age, r (years)	Julia's Age, j (years)
9	27
15	45
21	63

GO ON

15

All the students in the sixth grade either purchased their lunch or brought their lunch from home on Monday.

- 24% of the students purchased their lunch.
- 190 students brought their lunch from home.

How many students are in the sixth grade?

- A 76
- B 166
- C 214
- D 250

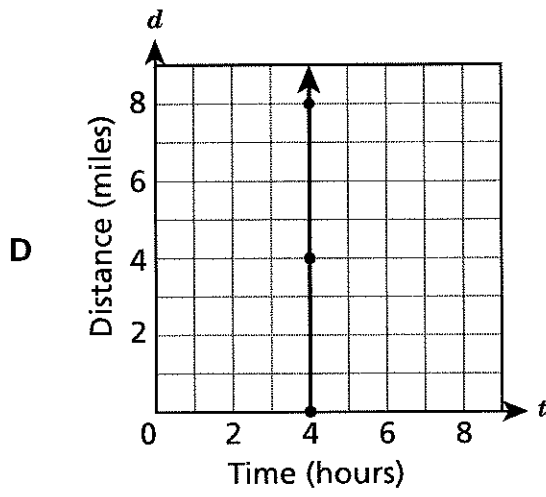
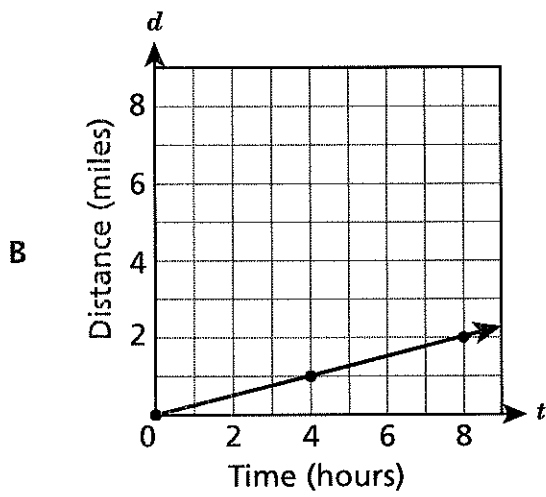
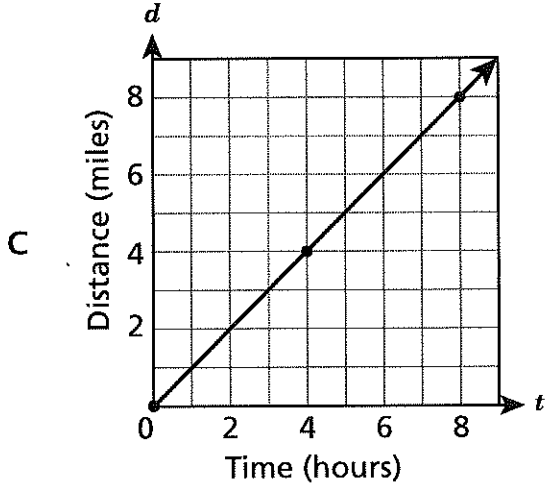
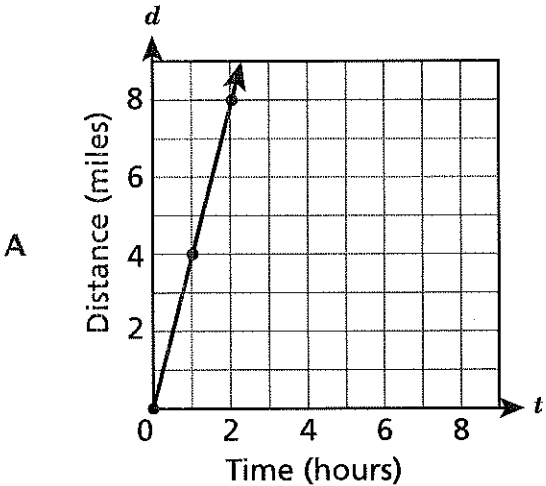
GO ON

16

Joe walks on a treadmill at a constant rate. The equation below describes the relationship between t , the time he walks in hours, and d , the distance he walks in miles.

$$d = 4t$$

Which graph represents the relationship between the amount of time Joe walks and the distance he walks?



25

Pat bounces a basketball 25 times in 30 seconds. At that rate, approximately how many times will Pat bounce the ball in 150 seconds?

- A 120
- B 125
- C 144
- D 145

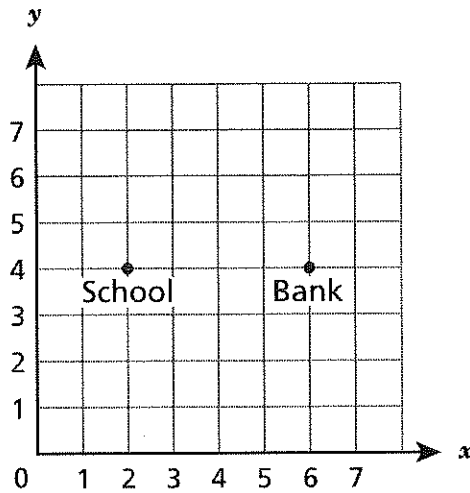
26

Which expression is equivalent to $5(4x + 3) - 2x$?

- A $18x + 15$
- B $18x + 3$
- C $7x + 8$
- D $2x + 8$

27

Mark graphed points on the coordinate plane below to represent the locations of his school and a bank.



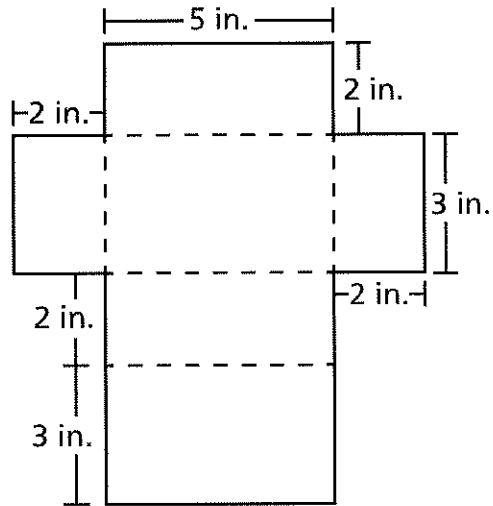
Mark wants to add the location of the library on the coordinate plane. The distance from the library to the school is the same as the distance from the bank to the school. Which ordered pair could be the coordinates of the library?

- A (2, 4)
- B (2, 8)
- C (4, 4)
- D (6, 8)

GO ON

28

A student draws the net below to show the dimensions of a container that is shaped like a right rectangular prism.



What is the surface area, in square inches, of the container?

- A 19
- B 30
- C 38
- D 62

29

Which two expressions are equivalent?

- A $x + x + x$ and x^3
- B $14x + 10 - 2x$ and $16x + 10$
- C $12x + 16x$ and $4(3x + 4x)$
- D $12x^2 + 5x + 10$ and $17x^2 + 10$

GO ON

30

A machine fills boxes at a constant rate. At the end of 35 minutes, it has filled 5 boxes. Which table represents the relationship between the number of minutes the machine fills boxes and the number of boxes it has filled?

FILLING BOXES

A

Time (minutes)	Boxes Filled
7	1
14	2
21	3
28	4

FILLING BOXES

C

Time (minutes)	Boxes Filled
1	7
2	14
3	21
4	28

FILLING BOXES

B

Time (minutes)	Boxes Filled
5	1
10	2
15	3
20	4

FILLING BOXES

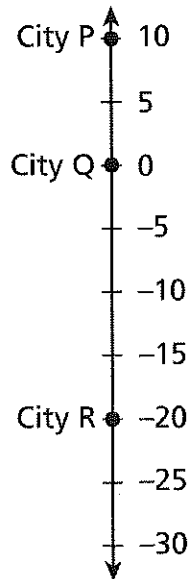
D

Time (minutes)	Boxes Filled
1	5
2	10
3	15
4	20

GO ON

32

The elevations, in feet, of three cities are marked on the number line shown below.



The point 0 on the number line represents sea level. Which statement must be true?

- A City P and City Q are above sea level.
- B City Q and City R are below sea level.
- C City P is above sea level and City Q is below sea level.
- D City P is above sea level and City R is below sea level.

33

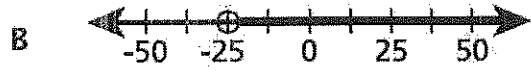
A basketball player attempts 15 baskets in a game. He makes 9 of the attempted baskets. Which ratio describes the number of baskets the player made to the number of baskets the player attempted?

- A $\frac{3}{5}$
- B $\frac{5}{3}$
- C $\frac{2}{5}$
- D $\frac{5}{2}$

GO ON

34

Which number line shows a graph of the inequality $x > -25$?



35

The coordinates of the points below represent the vertices of a rectangle.

P: (2, 2)

Q: (6, 2)

R: (6, 5)

S: (2, 5)

What is the perimeter, in units, of rectangle PQRS?

A 8

B 12

C 14

D 16

GO ON

36 Carol has $1\frac{5}{8}$ cups of yogurt to make smoothies. Each smoothie uses $\frac{1}{3}$ cup of yogurt.

What is the maximum number of smoothies that Carol can make with the yogurt?

- A 1
- B 4
- C 5
- D 7

37 Which expression is equivalent to $60 - 3y - 9$?

- A $3(17 - y)$
- B $3(20 - y) - 3$
- C $17(3 - y)$
- D $20(3 - 3y) - 9$

38 A grocery store sells a bag of 5 lemons for \$2.00. What is the unit cost of each lemon in the bag?

- A \$2.50
- B \$0.60
- C \$0.40
- D \$0.10

GO ON

39

An art teacher has a total of $\frac{7}{8}$ pound of clay. The teacher puts $\frac{1}{16}$ pound of clay at each work station. The teacher sets up an equal number of work stations in each of 2 classrooms. How many work stations does the teacher set up in each of the classrooms?

Show your work.

Answer _____ work stations

GO ON

40

Tom wants to order tickets online so that he and three of his friends can go together to a water park. The cost of the tickets is \$16.00 per person. There is also a \$2.50 one-time service fee for ordering tickets online. Write an expression in terms of n that represents the cost for ordering n tickets online.

Expression _____

Use your expression to find the total cost for ordering 4 tickets online.

Show your work.

Answer Total cost \$ _____

GO ON

44

Jaden made a pot of chili with 48 ounces of ground beef and 2 tablespoons of chili powder. He made another pot of chili with the same amount of ground beef, but he used 3 times as much chili powder. How many pounds of ground beef per tablespoon of chili powder did he use in the second pot of chili?

Show your work.

Answer _____ pound(s) per tablespoon

GO ON

Grade 6 Mathematics

SESSION 1

You may use your reference sheet and MCAS ruler during this session.
You may not use a calculator during this session.



DIRECTIONS

This session contains six multiple-choice questions, one short-answer question, and one open-response question. Mark your answers to these questions in the spaces provided in your Student Answer Booklet.

- 1 Justin divided 403 by a number and got a quotient of 26 with a remainder of 13. What was the number Justin divided by?

A. 13
B. 14
C. 15
D. 16

- 2 Leigh wants to find the number of ounces of pretzels in a 4-pound container. She knows the ratio of ounces to pounds is 16:1.

Which of the following equations can Leigh use to find x , the number of ounces of pretzels in the 4-pound container?

- A. $\frac{x \text{ ounces}}{4 \text{ pounds}} = \frac{16 \text{ ounces}}{1 \text{ pound}}$
B. $\frac{x \text{ ounces}}{4 \text{ pounds}} = \frac{1 \text{ pound}}{16 \text{ ounces}}$
C. $\frac{4 \text{ ounces}}{x \text{ ounces}} = \frac{16 \text{ pounds}}{1 \text{ pound}}$
D. $\frac{4 \text{ pounds}}{x \text{ ounces}} = \frac{16 \text{ pounds}}{1 \text{ ounce}}$

- 3 Which of the following is equivalent to the expression below?

$$7h + 1$$

- A. $h + 7$
- B. $7(h + 1)$
- C. $(5h + 2) + 1$
- D. $(5 + 2)h + 1$

- 4 Which of the following is equivalent to the expression below?

$$3 \times 3 \times 3 \times 3$$

- A. 3^3
- B. 3^4
- C. 4^3
- D. 4×3

Mark your answers to multiple-choice questions 7 and 8 in the spaces provided in your Student Answer Booklet. Do not write your answers in this test booklet. You may do your figuring in the test booklet.

7 Each meal at a school cafeteria is served with 2 portions of vegetables. What is the ratio of meals served to portions of vegetables served at the school cafeteria?

- A. 1:2
- B. 1:3
- C. 2:1
- D. 3:1

8 Madison finished $\frac{4}{5}$ of her homework before dinner. What percent of Madison's homework is left to finish?

- A. 15%
- B. 20%
- C. 45%
- D. 80%

Grade 6 Mathematics

SESSION 2

You may use your reference sheet and MCAS ruler during this session.
You may **not** use a calculator during this session.

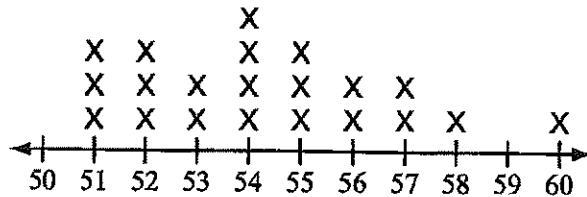


DIRECTIONS

This session contains ten multiple-choice questions, two short-answer questions, and one open-response question. Mark your answers to these questions in the spaces provided in your Student Answer Booklet.

- 9 All of the benches in a park are red or blue. The ratio of red benches to blue benches in the park is 3:4.
- Based on this information, which of the following statements is true?
- A. For every 4 benches in the park, 3 are red.
 - B. For every 7 benches in the park, 4 are red.
 - C. For every 3 red benches in the park, there are 4 blue benches.
 - D. For every 3 red benches in the park, there are 7 blue benches.

- 10 A police officer recorded the speeds, in miles per hour, of 21 cars that passed by on a highway. The results are shown in the line plot below.



Speeds of Cars on a Highway
(miles per hour)

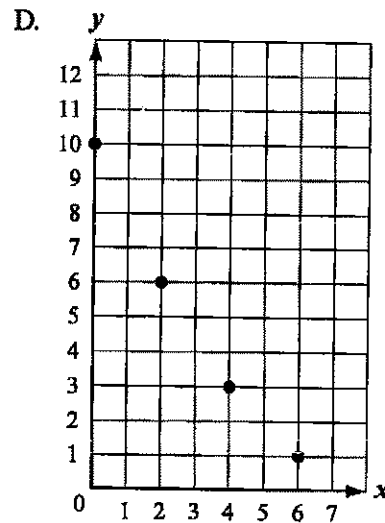
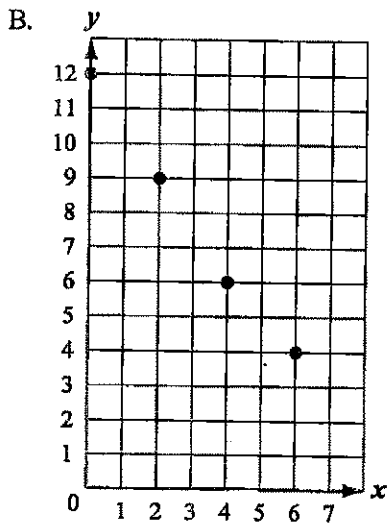
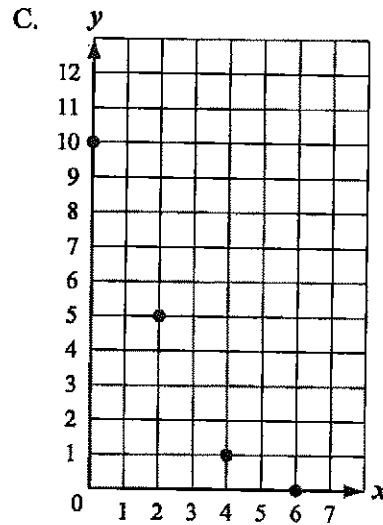
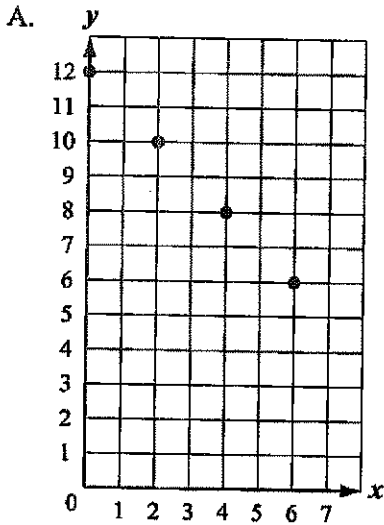
What is the total number of cars that had a recorded speed **greater than** 55 miles per hour?

- A. 6
- B. 9
- C. 12
- D. 21

Mark your answers to multiple-choice questions 18 through 21 in the spaces provided in your Student Answer Booklet. Do not write your answers in this test booklet. You may do your figuring in the test booklet.

proportional

18 Which of the following graphs shows a constant rate of change between the variables x and y ?



Mathematics

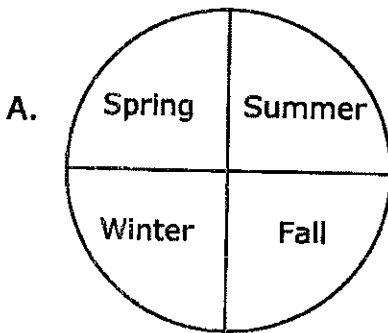
- 1 Rasheed conducted a survey at his school. He asked each student to name one favorite season of the year. The results of Rasheed's survey are shown in this chart.

Students' Favorite Season of the Year

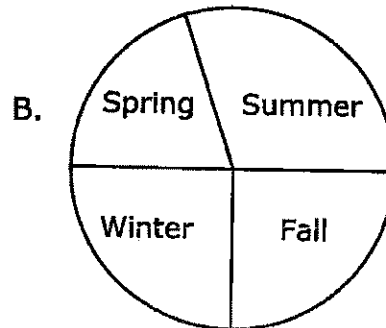
Season of the Year	Number of Students
Spring	120
Summer	180
Fall	150
Winter	150

Which of the following circle graphs appears to correctly represent the results of Rasheed's survey?

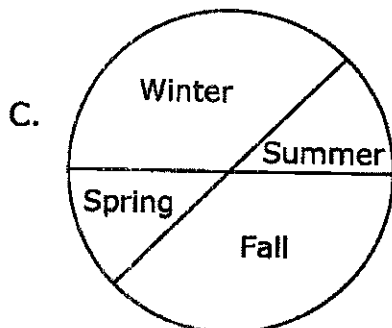
Students' Favorite Season of the Year



Students' Favorite Season of the Year



Students' Favorite Season of the Year



Students' Favorite Season of the Year

