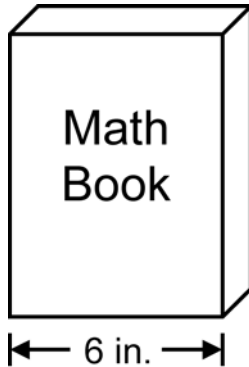


DIRECTIONS

Read each of the questions below and then decide on the BEST answer.

1



The math book is 6 inches wide.
How many centimeters wide is it?
(1 inch = 2.54 cm)

- A. 15.24 cm
- B. 12.70 cm
- C. 8.54 cm
- D. 3.46 cm

2

There is a $\frac{2}{3}$ probability that you will have homework in math class. What is the probability you will NOT have homework?

- A. 0
- B. $\frac{1}{3}$
- C. $\frac{2}{3}$
- D. 1

3

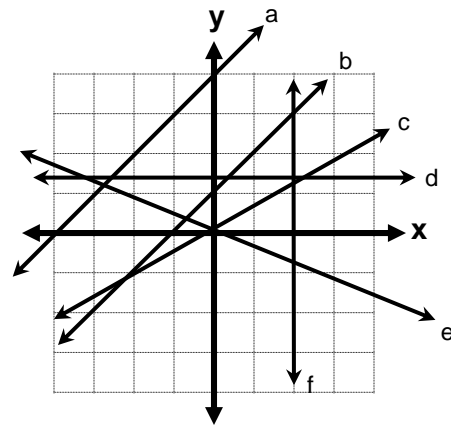
Evaluate $ab + 5c - d$

if $a = 3$, $b = 2$, $c = 7$, and $d = 4$

- A. 21
- B. 37
- C. 73
- D. 143

4

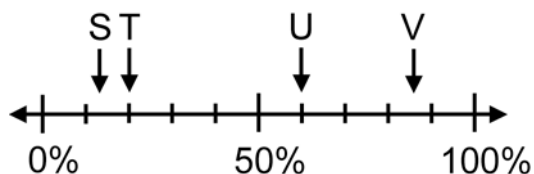
Which two lines are parallel?



- A. Line c and line e
- B. Line a and line d
- C. Line b and line c
- D. Line a and line b

Mathematics ▼

5



Patrick hit 12 home runs in 20 times at bat. Which letter best shows this percentage on the number line?

- A. S B. T C. U D. V

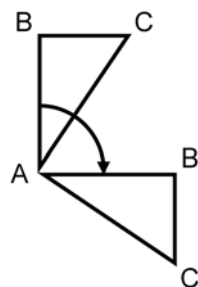
6

School Supplies	
Notepads	\$1.99
Binders	\$5.49
Markers	\$2.59
Pencils	\$1.89
Pens	\$2.29

The sign shows the prices of various school supplies. Hans bought some notepads and pencils and spent \$9.57. Which equation represents this situation?

- A. $3.88x = 9.57$
 B. $9.57 - x = y$
 C. $1.89x + 9.57 = 1.99y$
 D. $1.99x + 1.89y = 9.57$

7



Triangle ABC has been rotated 90° to form triangle $AB'C'$. How does the area of the image compare to the area of the original triangle?

- A. The area doubles.
 B. The area is smaller.
 C. The area is larger.
 D. The area is the same.

8

Sheree is comparing cars. She wants to be able to drive 330 miles for work without stopping for gas. Which cars will allow her to go that far?

Car	Gas Tank Size	Gas Mileage
1	12 gal	31 miles per gallon
2	12 gal	27 miles per gallon
3	16 gal	22 miles per gallon
4	20 gal	15 miles per gallon

- A. 1 and 3 C. 1 and 2
 B. 3 and 4 D. All of them

9

Carrie saved the money she earned baby-sitting for five months. If she earned \$24.25, \$12, \$22.50, \$15 and \$28.50, determine her average earnings per month.

- A. \$ 15.10
- B. \$ 20.45
- C. \$ 22.50
- D. \$102.25

10

Hal wants to ride his bike 200 miles this month. So far, he has ridden 65 miles. There are 15 days left. On average, how many miles does Hal need to ride each day?

- A. 14
- B. 9
- C. 8
- D. 4

11

Evaluate $4(x^2 - 6)$ if $x = 3$

- A. 0
- B. 12
- C. 30
- D. 36

12

Which of these is least likely to occur?

- A. Rolling an even number on a 6-sided die
- B. Rolling a multiple of 3 on a 6-sided die
- C. Choosing a heart from a deck of cards
- D. Choosing the queen of hearts from a deck of cards

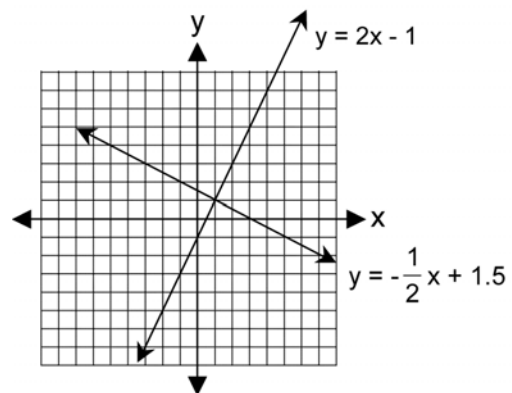
13

x	y
1	47
2	59
3	71
4	—
5	—
·	·
·	·
·	·

Kari has \$35 dollars. Once a week Kari gives skateboard lessons at the park. For this job she is paid \$12 each week. How many weeks will it take her to have a total of \$155?

- A. 6
- B. 10
- C. 13
- D. 16

14



The relationship between the two lines on the graph can best be described as_____.

- A. vertical
- B. horizontal
- C. parallel
- D. perpendicular

Mathematics ▼

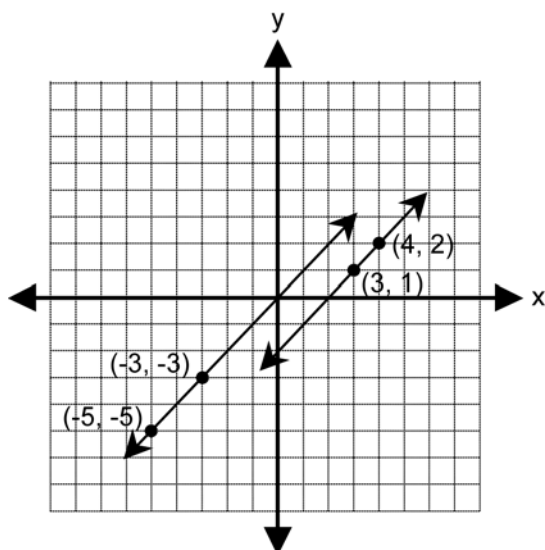
15

My flower garden is a square. It has an area of 1600 ft^2 . What is the length of one side of my garden?

- A. 40 feet
- B. 160 feet
- C. 6400 feet
- D. 1,560,000 feet

16

Two lines are plotted on the same coordinate plane. The first line passes through $(-5, -5)$ and $(-3, -3)$. The second passes through $(3, 1)$ and $(4, 2)$. The two lines are _____.



- A. intersecting, not perpendicular
- B. intersecting and perpendicular
- C. parallel with no common points
- D. parallel with infinite common points

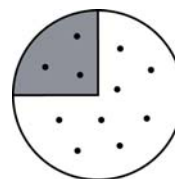
17

Erin wanted to know which motorcycle went the fastest. The white one could go 181 mph, the red one 289 km/h, the black one 192 mph and the blue one 278 km/h. Which color motorcycle went the fastest?

Use $1 \text{ km} = 0.62 \text{ miles}$.

- A. Black
- B. Blue
- C. Red
- D. White

18



The shaded part of the giant cookie shows what Terry ate. Cami and Renie each ate half of what was left over. What fraction of the cookie did Cami eat?

- A. $\frac{1}{4}$
- B. $\frac{1}{3}$
- C. $\frac{3}{8}$
- D. $\frac{3}{4}$

19

Slope = 2		Slope = $\frac{1}{2}$	
x	y	x	y
-2	-1	-2	2
-1	1	-1	$2\frac{1}{2}$
0	3	0	?
1	5	1	?
2	7	2	?

The first chart shows a linear function with a slope of 2. Finish the second chart of a linear function with a slope of $\frac{1}{2}$.

- A. $3, 3\frac{1}{2}, 4$
- B. $1\frac{1}{2}, 2\frac{1}{2}, 3\frac{1}{2}$
- C. $\frac{1}{2}, 1\frac{1}{2}, 2\frac{1}{2}$
- D. $0, \frac{1}{2}, 1$

20

David drew marbles from a bag, replacing them each time. His results are as follows:

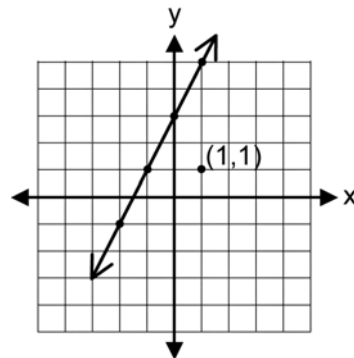
red	III
blue	IIII
green	IIII II
white	III
black	II

Using the same ratios, if he drew and replaced 60 times, how many times would he expect to get a blue?

- A. 5
- B. 15
- C. 21
- D. 30

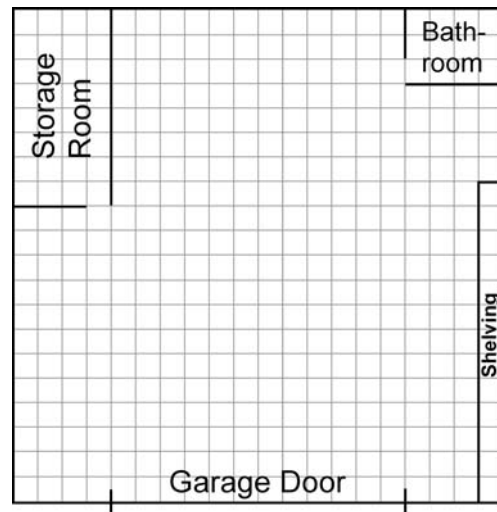
21

Which equation is shown on the graph?



- A. $y = 3x + 3$
- B. $y = 3x - 3$
- C. $y = 2x - 3$
- D. $y = 2x + 3$

22



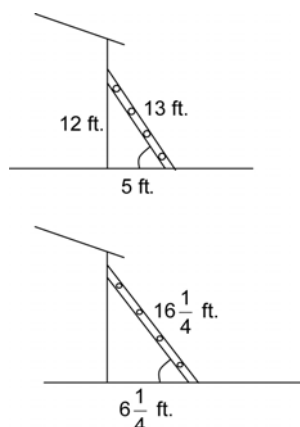
□ = 2 ft. x 2 ft.

This is a sketch of a 40 ft. by 40 ft. shop. Using the sketch and scale given, the area of the storage room when built will be _____ ft.²

- A. 32
- B. 48
- C. 96
- D. 128

Mathematics ▼

23



John puts a 13-foot ladder against his house. His ladder is 5 feet away from the wall at the base and reaches 12 feet up his house.

Similarly, John uses a $16\frac{1}{4}$ foot ladder that is

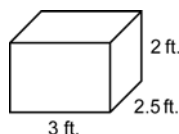
$6\frac{1}{4}$ feet away from the wall. The longer ladder will reach _____ feet up the house.

- A. $15\frac{1}{4}$ B. 15 C. 14 D. $13\frac{1}{4}$

24

The Smiths want to build a new doghouse with a volume 4 times that of their old one. What might the dimensions of the new doghouse be?

Shown is a picture of the original doghouse without the roof.



- A. 7 ft. by 6.5 ft. by 6 ft.
B. 2 ft. by 2.5 ft. by 6 ft.
C. 3 ft. by 4 ft. by 5 ft.
D. 4 ft. by 5 ft. by 6 ft.

25

David is playing a game in which two fair dice are rolled. To make the first move he needs to roll doubles or a sum of 9. What is the probability that David will be able to make the first move?

- A. $\frac{2}{9}$ B. $\frac{1}{4}$ C. $\frac{5}{18}$ D. $\frac{2}{3}$

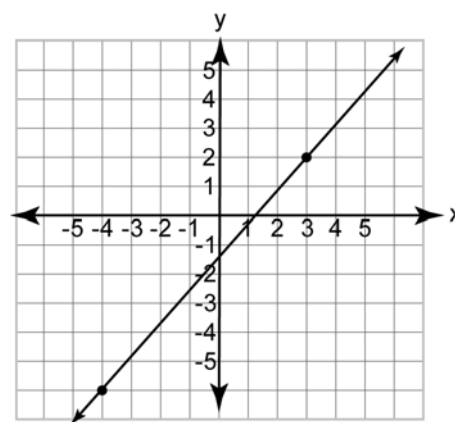
26

What is the slope of the line that goes through $(-3, 2)$ and $(3, 0)$?

- A. $-\frac{3}{2}$ B. $-\frac{1}{3}$ C. 1 D. 3

27

Joan connects point $(3, 2)$ and point $(-4, -6)$. Use what you know about right triangles to calculate the length of the line segment Joan drew (round to the nearest tenth).



- A. 7.5 units C. 10.6 units
B. 8.0 units D. 10.7 units

28

If a square has an area of 35 square units, what would be the length of its sides?

- A. 8.75 units
- B. 17.5 units
- C. $\sqrt{17.5}$ units
- D. $\sqrt{35}$ units

29

Two regular six-sided dice are rolled. One die is red and one is green. They will either show the same number or not. How many times as likely is it that the numbers will be different?

- A. 5 times as likely
- B. 6 times as likely
- C. 12 times as likely
- D. 30 times as likely

30

Determine the slope of the line with points located at $(-3, 2)$ and $(1, 2)$.

- A. -2
- B. 5
- C. 0
- D. Undefined



GRADE 8 MATHEMATICS SAMPLE TEST KEY 2008 – 2010

Test Item	Correct Answer	Score Reporting Category	SRC Coding
1	A	Measurement	2.1.82
2	B	Statistics and Probability	3.2.81
3	B	Algebraic Relationships	4.2.86
4	D	Geometry	5.3.81
5	C	Calculations and Estimations	1.1.810
6	D	Algebraic Relationships	4.287
7	D	Geometry	5.4.87
8	A	Measurement	2.2.821
9	B	Statistics and Probability	3.1.81
10	B	Algebraic Relationships	4.2.87
11	B	Algebraic Relationships	4.2.86
12	D	Statistics and Probability	3.2.81
13	B	Algebraic Relationships	4.2.87
14	D	Geometry	5.3.81
15	A	Calculations and Estimations	1.3.82
16	C	Geometry	5.3.81
17	A	Measurement	2.1.82
18	C	Calculations and Estimations	1.2.81
19	A	Algebraic Relationships	4.4.83
20	B	Statistics and Probability	3.4.81
21	D	Algebraic Relationships	4.2.82
22	D	Measurement	2.2.822
23	B	Geometry	5.1.88
24	C	Measurement	2.2.818
25	C	Statistics and Probability	3.2.81
26	B	Algebraic Relationships	4.4.82
27	C	Geometry	5.3.82
28	D	Calculations and Estimations	1.3.82
29	A	Statistics and Probability	3.2.81
30	C	Algebraic Relationships	4.4.82

CONVERTING TO A RIT SCORE

Number Correct	RIT score	Number Correct	RIT score
1	188.6	16	230.9*
2	196.4	17	232.7
3	201.4	18	234.6
4	205.2	19	236.5
5	208.3	20	238.4
6	211.1	21	240.5
7	213.5	22	242.6**
8	215.8	23	244.8
9	217.9	24	247.3
10	219.9	25	250
11	221.8	26	253.1
12	223.7	27	256.8
13	225.5	28	261.7
14	227.3	29	269.4
15	229.1	30	276.8

* Likely to meet Grade 8 Standards

** Likely to exceed Grade 8 Standards

Note: The sample test is for practice only; scores may not be substituted for the Oregon Statewide Assessment.