DIRECTIONS

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

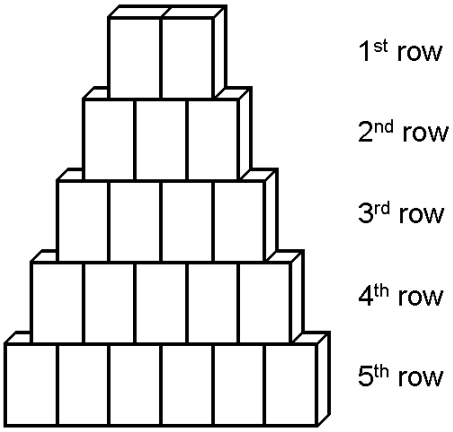
1

In a game show, contestants gain or lose points by answering questions. Jacob began with 27 points, lost 53, and gained 15. What was his final score?

A. -41
B. -11
C. 41
D. 95

2

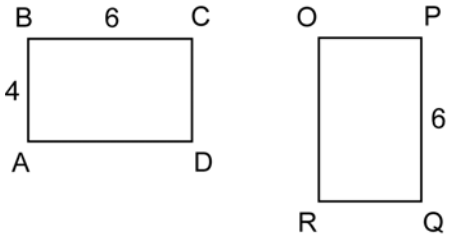
Stacie is stacking boxes of cereal for a display at the supermarket as shown.



Which expression represents the number of boxes in the r^{th} row, where r = the row number?

A. r – 1
B. r
C. r + 1
D. (r + 1) – 1

3



These two rectangles are congruent. The length of side $\overline{OP}$ is _____ units.

A. 4 B. 6 C. 8 D. 12

4

Find the next two numbers for this arithmetic sequence:

10, -4, -18, -32, ___, ___

A. -38, -44
B. -44, -52
C. -46, -60
D. -52, -68

5

Bicycles come in 3 colors: black, red, and blue. They can have 2 different types of seats and 2 different types of tires. How many different bicycles can be made?

A. 1 bicycle
B. 7 bicycles
C. 10 bicycles
D. 12 bicycles

Mathematics ▼

6

Rosario earns $8.00 per hour working at her dad's pet food company. She worked 4 hours on Monday, 3 hours on Wednesday, 5 hours on Friday, and 5 hours on Saturday. How much did she earn all together for the 4 days?

A. $17 B. $32 C. $96 D. $136

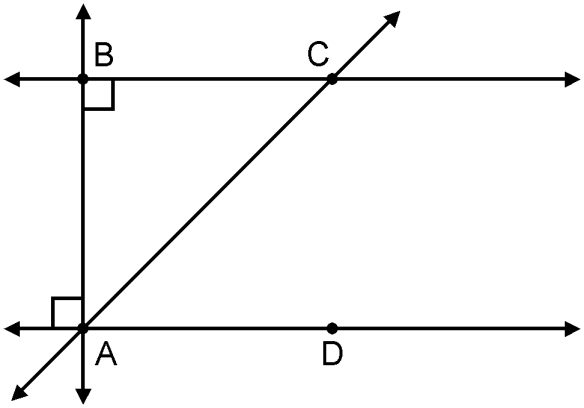
7

Luis is building a doghouse. It is in the shape of a rectangular solid. It measures 4 feet high, 4 feet wide, and 5 feet deep. What is the volume of the dog house?

A. 13 $feet^3$
B. 27 $feet^3$
C. 80 $feet^3$
D. 112 $feet^3$

8

Which of the following is true?



A. Line AD is parallel to line BC.
B. Line AD is perpendicular to line BC.
C. Line AB is parallel to line BC.
D. Line AC is perpendicular to line BC.

9

There are 5 chips, numbered 1 through 5. If one chip is selected at random, what is the probability it will have an even number on it?

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

10

A group of ten people is going to play ball this weekend. Four will play basketball; half as many will play baseball, and the rest will play soccer. How many people will play soccer?

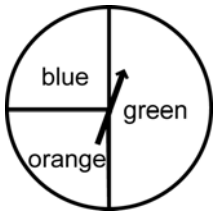
A. 2
B. 4
C. 6
D. 8

11

The dimensions of the swimming pool in Brenda's backyard are: 72 inches deep, 120 inches wide and 240 inches long.
To find the volume in cubic feet, multiply ____.

A. 6 ft. x 10 ft. x 20 ft.
B. 24 ft. x 40 ft. x 80 ft.
C. 36 ft. x 60 ft. x 120 ft.
D. 864 ft. x 1440 ft. x 2880 ft.

12



If Sydney spins the spinner 100 times, about how many times will the spinner probably land on orange?

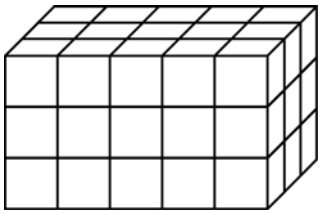
A. $\frac{1}{3}$ times

B. 25 times

C. 50 times

D. 90 times

13



Tanisha built a rectangular prism out of 1-inch blocks. How many blocks did she use to build this figure?

A. 15

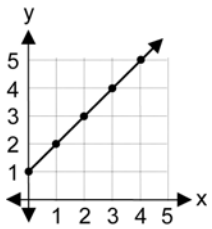
B. 39

C. 45

D. 78

14

Which equation best describes the relationship shown in the graph?



A. $y = x + 1$

B. $y = x - 1$

C. $y = 2x$

D. $y = \frac{x}{2}$

15

Your school charges students $2.00 to attend the after school carnival and 25 cents for every game a student plays. Which formula will find your total cost (T) for attending the carnival and playing n games?

A. $T = 0.25n$

B. $T = 2n + 0.25$

C. $T = 25n + 2$

D. $T = 2 + 0.25n$

Mathematics ▼

16

Alejandra is training for the swim team tryouts. She plans to swim an average (mean) of 5.5 miles a week.

So far, she has swum 2 miles the first week, 7 miles the second week, 6 miles the third week, 9 miles the fourth week, 5 miles the fifth week, and 3 miles the sixth week.

How many miles must she swim the seventh week, in order to reach her goal of averaging 5.5 miles per week?

A. 4.6 miles
B. 5.5 miles
C. 6.5 miles
D. 12.5 miles

17

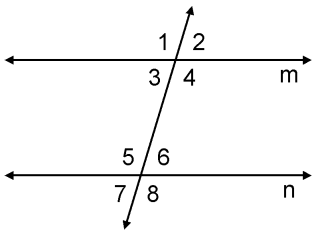
Solve this equation.

$$(2x + 1) - 4 = 136$$

A. x = 67.5
B. x = 69.5
C. x = 70
D. x = 137

18

In the figure below, lines m and n are parallel. If m ∠ 1 = 100°, then find m ∠ 5.



A. 80°
B. 100°
C. 110°
D. 140°

19

The 10th grade class at Forest Grove High School could be divided into equal sized groups of 6, 12, or 17 students for photos. What is the least number of students in the 10th grade class?

A. 102
B. 204
C. 306
D. 404

20

Matt has 4 deciliters of milk. Will the milk fill a 1-liter bottle?

A. Yes, it equals 40 liters.
B. Yes, it equals 4 liters.
C. No, it equals 0.4 liters.
D. No, it equals 0.04 liters.

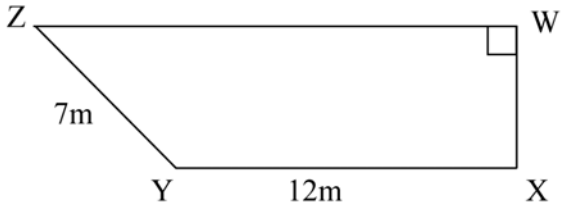
21

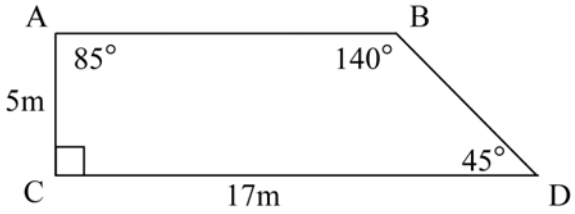
Candy wants to buy a skateboard. She needs $87. She will do one week of Garden Care and one week of Child Care. How many lawns does she need to mow?

Candy's Job Chart	
Job	**Pay**
Garden Care	$10 a week
Child Care	$15 a week
Lawn Mowing	$8 a lawn

A. 3
B. 5
C. 8
D. 11

22



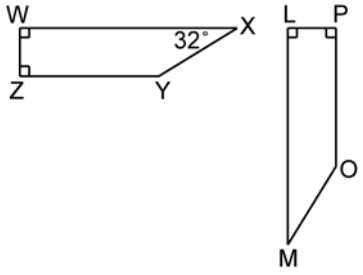


Using the congruent quadrilaterals, what is the measure of ∠XYZ?

A. 85°
B. 130°
C. 140°
D. 220°

23

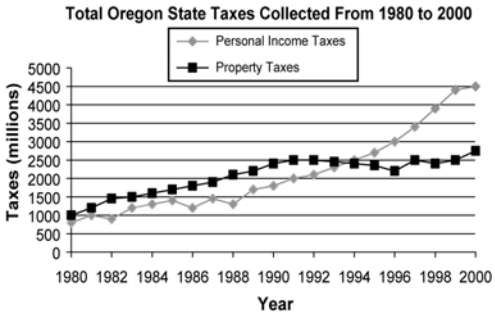
If trapezoid WXYZ ≅ LMOP, what is the measure of ∠O?



A. 32°
B. 90°
C. 122°
D. 148°

24

Approximately how much was collected in total taxes in 1990?



A. $ 2,450
B. $ 2,450,000
C. $3,800,000,000
D. $4,200,000,000

25

Sal pays $30 to join the Golf Club. Each time he golfs, it costs $8. What is the TOTAL cost for Sal to golf 20 times at his Golf Club?

A. $240
B. $220
C. $190
D. $160

26

Students were asked to explain the first step in solving the equation: 3y + 4 = 16. Four students volunteered their answer.

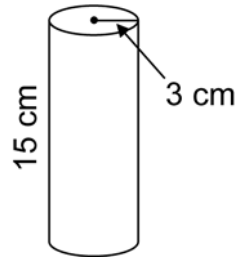
Susan says, “multiply by 3.”
Ted says, “add 4 to both sides.”
Greg says, “subtract 4 from both sides.”
Tonya says, “add 16 to both sides.”

Who is correct?

A. Susan
B. Ted
C. Greg
D. Tonya

Mathematics ▼

27



What is the approximate volume of the glass?

A. 1695 cm^3

B. 424 cm^3

C. 283 cm^3

D. 141 cm^3

28

Using the stem-and-leaf plot, what is the mode?

1	0	2		
2	2	2	3	4
3	2	2	3	4
4	2	2	5	6
5	2	5	7	
6	5	5	5	5

A. 2

B. 40

C. 42

D. 65

29

Zane was given the equation $2x - 5 = y$ and wondered what the graph of this equation would look like. Which of the following best describe the graph?

A. A line that rises from left to right

B. A vertical line

C. A line that falls from left to right

D. A horizontal line

30

Cris was asked to draw a rectangle on a coordinate graph. He knew that the length was parallel to the x-axis and was 10 units long, while the width was parallel to the y-axis and was 5 units long. Two of the vertices have coordinates (-4, 2) and (6, 2). What are possible coordinates of the missing vertices?

A. (-4, -8) and (6, -8)

B. (-4, -12) and (6, 12)

C. (-4, -5) and (6, -5)

D. (-4, -3) and (6, -3)

GRADE 7 MATHEMATICS SAMPLE TEST KEY 2008 – 2010

Test Item	Correct Answer	Score Reporting Category	SRC Coding
1	B	Calculations and Estimations	1.2.71
2	C	Algebraic Relationships	4.1.71
3	A	Geometry	5.1.77
4	C	Algebraic Relationships	4.1.71
5	D	Statistics and Probability	3.2.74
6	D	Calculations and Estimations	1.3.73
7	C	Measurement	2.2.711
8	A	Geometry	5.1.73
9	B	Statistics and Probability	3.2.72
10	B	Algebraic Relationships	4.2.76
11	A	Measurement	2.1.74
12	B	Statistics and Probability	3.2.72
13	C	Measurement	2.2.715
14	A	Algebraic Relationships	4.2.77
15	D	Algebraic Relationships	4.3.71
16	C	Statistics and Probability	3.1.71
17	B	Algebraic Relationships	4.2.72
18	B	Geometry	5.1.73
19	B	Calculations and Estimations	1.1.715
20	C	Measurement	2.1.74
21	C	Algebraic Relationships	4.1.71
22	C	Geometry	5.1.77
23	D	Geometry	5.1.77
24	D	Statistics and Probability	3.3.75
25	C	Algebraic Relationships	4.3.71
26	C	Calculations and Estimations	1.3.75
27	B	Measurement	2.2.711
28	D	Statistics and Probability	3.3.75
29	A	Algebraic Relationships	4.3.71
30	D	Geometry	5.3.71

CONVERTING TO A RIT SCORE

Number Correct	RIT score	Number Correct	RIT score
1	186.4	16	229.1
2	194.4	17	230.8
3	199.4	18	232.6
4	203.3	19	234.4
5	206.5	20	236.2
6	209.3	21	238.2**
7	211.8	22	240.2
8	214.1	23	242.4
9	216.2	24	244.7
10	218.2	25	247.3
11	220.2	26	250.3
12	222.0	27	254.0
13	223.8	28	258.8
14	225.6	29	266.4
15	227.3*	30	273.7

* Likely to meet Grade 7 Standards ** Likely to exceed Grade 7 Standards

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