

## DIRECTIONS

Read each of the questions below and then decide on the BEST answer. There are a lot of different kinds of questions, so read each question carefully before marking an answer on your answer sheet.

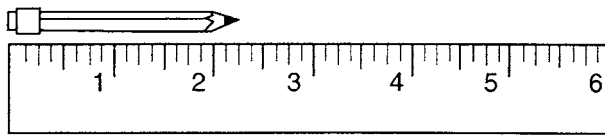
**1**

A cell phone contract has the following rates: a monthly fee of \$8.95 and a charge of \$0.32 per minute. Jim budgets for a bill of \$25 per month. Approximately how many minutes can Jim use the phone each month and stay within his budget?

- A. About 20 minutes
- B. About 30 minutes
- C. About 50 minutes
- D. About 60 minutes

**2**

How long to the nearest quarter of an inch is Suzie's stubby pencil?



- A. 2"
- B.  $2\frac{1}{8}$ "
- C.  $2\frac{1}{4}$ "
- D.  $2\frac{3}{8}$ "

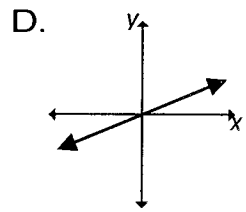
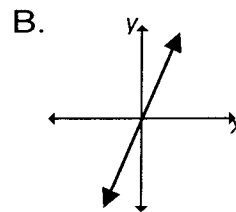
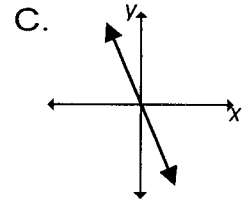
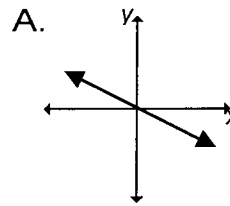
**3**

The chances of winning the 3-number lottery are about 1 out of 1,000. Sally has played the same 3-digit number in the lottery for 999 days and has never won. What are the chances that she will win on the 1,000th day?

- A. 1 out of 2
- B. 999 out of 1,000
- C. 1 out of 1
- D. 1 out of 1,000

**4**

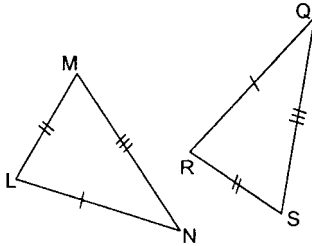
Which line has the steepest positive slope?



# Mathematics ▼

5

Name a pair of corresponding angles on the figures shown.



- A.  $\angle LMN \leftrightarrow \angle RQS$
- B.  $\angle MNL \leftrightarrow \angle QSR$
- C.  $\angle LMN \leftrightarrow \angle RSQ$
- D.  $\angle MNL \leftrightarrow \angle SRQ$

6

A coat is on sale for 20% off the regular price of \$63. What is the price of the coat if the store is offering an additional 15% off the sale price?

- A. \$28.00
- B. \$40.95
- C. \$42.84
- D. \$50.40

7

A factory makes steel plates that are  $30 \text{ mm} \pm 2 \text{ mm}$  thick. These plates are in stacks of 100. Which of these is most likely the height of one stack?

- A. 2.4 meters
- B. 3.1 meters
- C. 4.0 meters
- D. 4.5 meters

8

Jennifer received the following test scores in geometry. What score will she have to get on the next test to have an average of 88%?

Jennifer's Geometry Scores					
Test	1	2	3	4	5
Score	79%	94%	85%	96%	83%

- A. 87.4%
- B. 88.0%
- C. 89.5%
- D. 91.0%

9

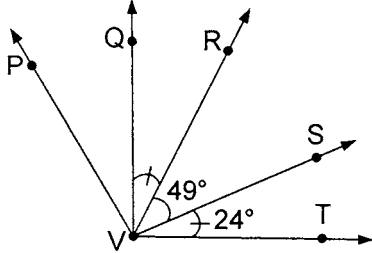
Solve the equation:

$$\frac{3}{8}(5x - 3) = 72$$

- A. 6
- B. 37.8
- C. 39
- D. 40

10

What is the measure of  $\angle PVQ$  if the  $m\angle PVT = 150^\circ$ ?



- A.  $24^\circ$
- B.  $48^\circ$
- C.  $53^\circ$
- D.  $73^\circ$

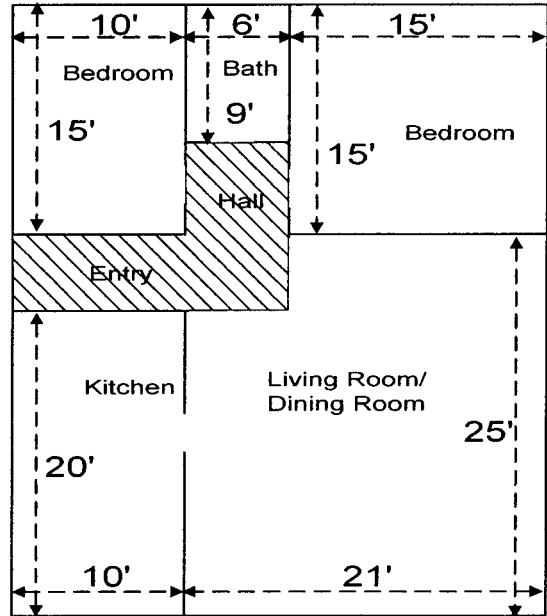
11

A monthly bus pass with unlimited rides costs \$43; a book of 10 one-way ride tickets costs \$12; and a ticket for a one-way ride costs \$1.30. If Mel takes 15 round-trips on the bus per month, which ticket purchase option should he use?

- A. Buy a one-way ticket for each trip.
- B. Buy a monthly pass.
- C. Buy 3 books of 10 tickets.
- D. Buy 2 books of 10 tickets and buy one-way tickets as needed.

12

Toni wants to have hardwood floors installed in the entry and hall of her new house. If flooring costs \$10 per square foot installed, how much will Toni have to spend on flooring?



- A. \$116
- B. \$1,000
- C. \$1,050
- D. \$1,160

13

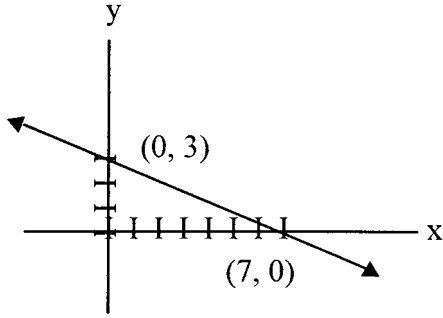
In a group of 600 algebra students, 345 are female. What is the probability that an algebra student chosen at random from the group is a male?

- A. 0.255
- B. 0.345
- C. 0.425
- D. 0.500

# Mathematics ▼

14

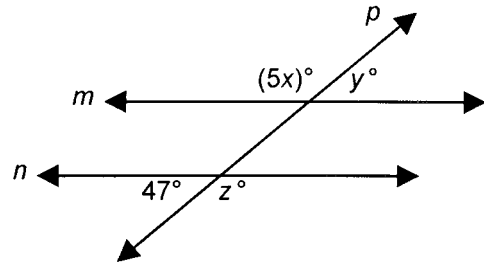
Which equation represents the graph?



- A.  $y = -\frac{3}{7}x + 3$
- B.  $y = \frac{3}{7}x + 3$
- C.  $y = -\frac{7}{3}x + 3$
- D.  $y = -\frac{3}{7}x + 7$

15

Lines  $m$  and  $n$  are parallel. What is the value of  $x - y + z$ ?



- A.  $9.4^\circ$
- B.  $47^\circ$
- C.  $112.6^\circ$
- D.  $133^\circ$

16

In one month Melissa earned \$40 for babysitting. The next month she earned \$44. By what percent did her earnings increase?

- A. 9%
- B. 10%
- C. 91%
- D. 110%

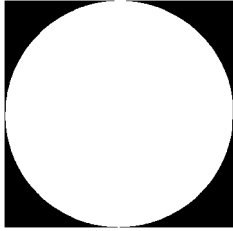
**17**

George needs to paint a wall. In order to reach the top portion of the wall, the ladder must reach 12 feet up the wall. If the ladder is 15 feet long, how far away from the wall will the base of the ladder be placed so that George can reach the top of the wall?

- A. 3 ft.
- B. 6 ft.
- C. 9 ft.
- D. 12 ft.

**18**

Joe has a dart board that looks like the square board shown here.



The shaded region is worth the most points. If his dart board is 15 inches on each side, what is the percent chance that a dart will hit the shaded region?

- A. 6.7%
- B. 10.5%
- C. 21.5%
- D. 78.6%

**19**

Find the next number in the sequence.

**2, 5, 7, 12, 19, \_\_\_\_**

- A. 26
- B. 28
- C. 31
- D. 32

**20**

Captain Angle sailed his ship 15 miles north, turned east and continued until his ship was 17 miles from the starting point. To the nearest mile, how far east did his ship sail?

- A. 2 miles
- B. 8 miles
- C. 23 miles
- D. 32 miles

**21**

The answer expressed in scientific notation would be

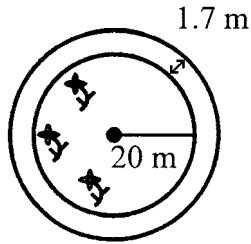
**$(2.45 \times 10^5) \times (5 \times 10^3)$**

- A.  $1.225 \times 10^9$
- B.  $12.25 \times 10^8$
- C.  $1.225 \times 10^{15}$
- D.  $12.25 \times 10^{15}$

# Mathematics ▼

22

Juanita and Nguyen are walking on the sidewalk around a circular garden. The radius of the garden is 20 meters. The width of the sidewalk is 1.7 meters. Juanita walks on the inside edge of the sidewalk and Nguyen walks on the outside edge. To the nearest 0.1 meter, how much farther than Juanita will Nguyen walk?



- A. 3.4 m
- B. 10.7 m
- C. 13.5 m
- D. 21.7 m

23

For the set of values, determine which of the following statements are true.

**{25, 32, 38, 38, 42, 45, 46, 54}**

- I. The median of the set is 40.
  - II. The mean of the set is 40.
  - III. The mode of the set is 40.
- 
- A. I only
  - B. II only
  - C. I and II only
  - D. II and III only

24

Which statement is true for the lines whose equations are  $x - 2y = 3$  and  $2x - 4y = 5$ ?

- A. The lines are perpendicular.
- B. The lines are parallel.
- C. The lines intersect at the origin.
- D. The lines are neither parallel nor perpendicular.

25

A television screen with a 12-inch diagonal has a height of 9 inches. What is the diagonal of a similar television screen with a height of 15-inches?

- A. 11.25 in.
- B. 12 in.
- C. 15 in.
- D. 20 in.

## C.I.M. BENCHMARK MATHEMATICS SAMPLE TEST KEY 2001 – 2002

Test Item	Correct Answer	Score Reporting Category
1	C	Calculations and Estimations
2	C	Measurement
3	D	Statistics and Probability
4	B	Algebraic Relationships
5	C	Geometry
6	C	Calculations and Estimations
7	B	Measurement
8	D	Statistics and Probability
9	C	Algebraic Relationships
10	C	Geometry
11	C	Calculations and Estimations
12	D	Measurement
13	C	Statistics and Probability
14	A	Algebraic Relationships
15	C	Geometry
16	B	Calculations and Estimations
17	C	Measurement
18	C	Statistics and Probability
19	C	Algebraic Relationships
20	B	Geometry
21	A	Calculations and Estimations
22	B	Measurement
23	C	Statistics and Probability
24	B	Algebraic Relationships
25	D	Geometry

CONVERTING TO A RIT SCORE			
Number Correct	RIT score	Number Correct	RIT score
1	189.2	14	237.6
2	199.1	15	240.0 •
3	205.2	16	242.4
4	209.9	17	245.0
5	213.8	18	247.8
6	217.1	19	250.7 ••
7	220.1	20	254.0
8	222.9	21	257.8
9	225.5	22	262.4
10	228.0	23	268.5
11	230.4	24	278.3
12	232.8	25	287.7
13	235.2		

### Recommendations for Level Test Placement:

• Likely to meet CIM Standards

•• Likely to exceed CIM Standards

Students with 8 or fewer correct answers are likely to take Form A  
 Students with 20 or more correct answers are likely to take Form C

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