

VIRGINIA STANDARDS OF LEARNING

Spring 2005 Released Test

GRADE 5 MATHEMATICS

CORE 1

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Mathematics

DIRECTIONS

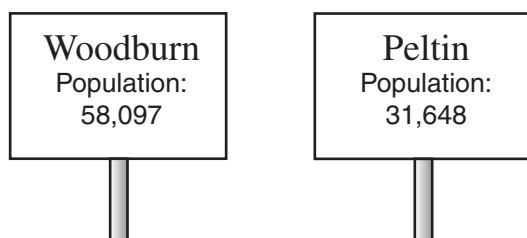
Read and solve each question. Then mark the space in the answer booklet for the best answer.

SAMPLE

**Jenny found 17 seashells at the beach.
What is 17 rounded to the nearest ten?**

- A 10
- B 15
- C 20
- D 25

- 1 These signs show the population of two different towns.**



How much *greater* is the population of Woodburn than Peltin?

- A 26,449
- B 27,651
- C 89,745
- D 90,645

- 2 The solution to $49,364 - 15,869$ is *closest to* —**

- F 300
- G 3,000
- H 30,000
- J 300,000

- 3 $520 \div 5 =$**

- A 140
- B 124
- C 120
- D 104

- 4 The solution to 421×32 is *closest to* —**

- F 120
- G 1,200
- H 12,000
- J 120,000

5 $3 \overline{)1.725} =$

- A 0.0512
- B 0.0575
- C 0.512
- D 0.575

6 $347 + 602 + 1,985 =$

- F 1,934
- G 2,824
- H 2,934
- J 11,475

7 $9.62 - 7.154 =$

- A 2.534
- B 2.466
- C 2.474
- D 0.6192

8 A bag of chocolate candy holds exactly 408 pieces. Eight friends plan to share the chocolate pieces equally. How many chocolate pieces should each friend receive?

- F 3,264
- G 416
- H 400
- J 51

- 9 Suni needs $\frac{2}{3}$ cup white sugar and $\frac{1}{4}$ cup brown sugar to make cookies.

How much sugar is that all together?

- A $\frac{11}{12}$ cup
B $\frac{2}{12}$ cup
C $\frac{3}{7}$ cup
D $\frac{2}{7}$ cup

10 $0.05 \times 6 =$

- F 30
G 0.30
H 0.03
J 0.003

11 $9 \overline{)8,245} =$

- A 916 R1
B 916
C 915 R1
D 905

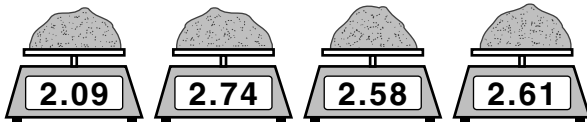
12
$$\begin{array}{r} 7\frac{1}{5} \\ + 6\frac{2}{5} \\ \hline \end{array}$$

- F $1\frac{1}{5}$
G $13\frac{3}{5}$
H $13\frac{3}{10}$
J $14\frac{2}{3}$

Do not turn the
page until your
teacher tells you
to do so.



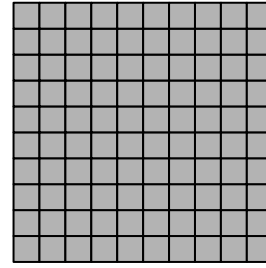
- 13 The scales below show the weights, in grams, of four soil samples.



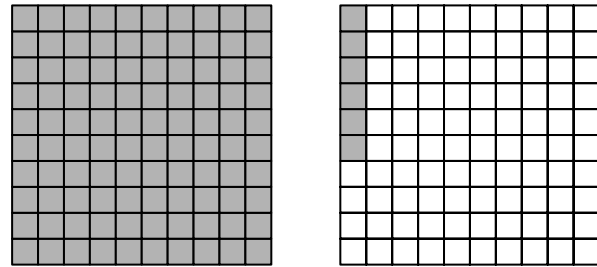
Which of the following is true about the weights of the soil samples?

- A $2.61 < 2.09$
- B $2.74 < 2.58$
- C $2.09 < 2.61$
- D $2.58 < 2.09$

- 14 This figure is shaded to represent the number 1.



Which of the following numbers is represented by the shaded part of the figure below?



- F 1.006
- G 1.06
- H 1.6
- J 16.0

- 15 Which means “nine hundred sixty-three thousandths”?

- A 9,630
- B 0.963
- C 0.0963
- D 0.90063

- 16 The table shows last season's earned run averages (ERAs) for the four best pitchers in the Roanoke Little League.

Pitcher	ERA
Rasmund	2.34
Feinstein	2.54
Gotkowski	2.59
Johnson	2.65

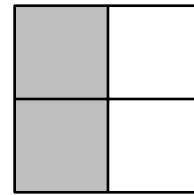
Which pitcher's ERA is 2.6 when rounded to the nearest tenth?

- F Rasmund
G Feinstein
H Gotkowski
J Johnson
- 17 What number goes in the blank space to make the statement below true?

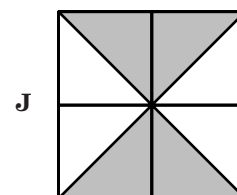
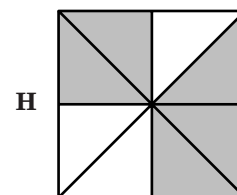
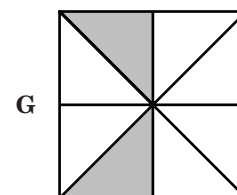
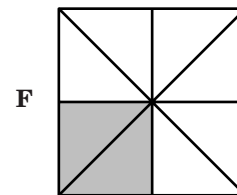
$$\frac{1}{3} = \frac{\quad}{9}$$

- A 1
B 3
C 4
D 6

- 18 Eddie shaded a fraction of this square.



Which shows an equivalent fraction shaded?



- 19 Which of the following has a value less than $\frac{1}{2}$?

A $\frac{2}{3}$

B $\frac{7}{10}$

C $\frac{1}{4}$

D $\frac{3}{5}$

- 20 There were 75,631 people at a concert. What is that number rounded to the nearest ten thousand people?

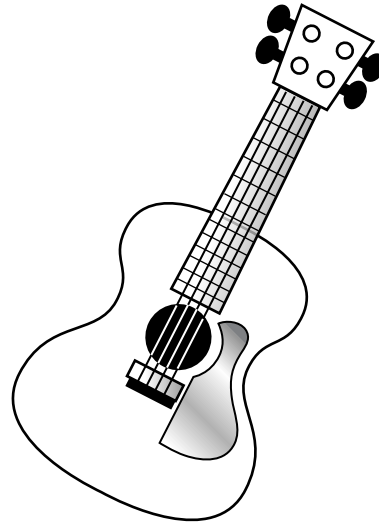
F 60,000

G 70,000

H 80,000

J 90,000

- 21 Use your centimeter ruler to help you answer this question.



Which is *closest* to the length of the toy guitar shown above?

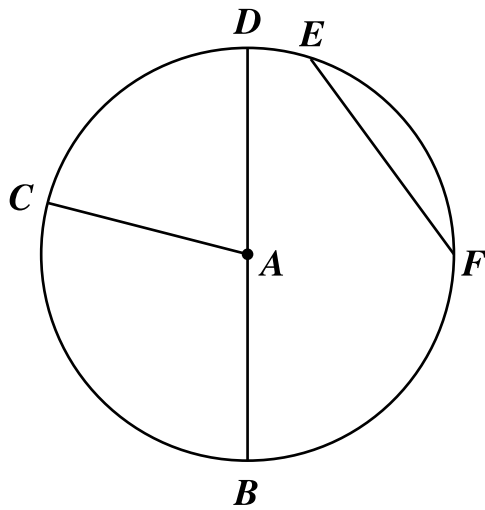
A 5 cm

B 6 cm

C 7 cm

D 8 cm

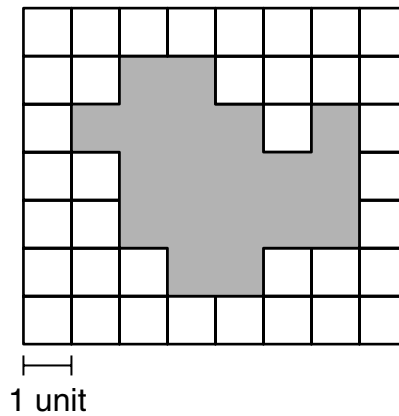
- 22 Point A is the center of the circle.



\overline{EF} is best described as —

- F a radius
 - G a chord
 - H a diameter
 - J an arc
- 23 Which unit could be used for measuring the weight of a rock?
- A Square inch
 - B Mile
 - C Milliliter
 - D Kilogram

- 24 What is the perimeter of the shaded figure on the grid below?

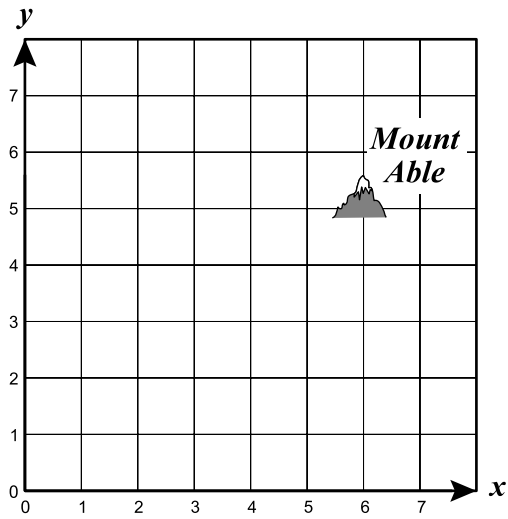


- F 20 units
- G 21 units
- H 22 units
- J 24 units

- 25 For a field trip, Alice's class left the school at 7:10 a.m. The class returned to the school at 8:23 p.m. the same day. How long was the class away for the field trip?

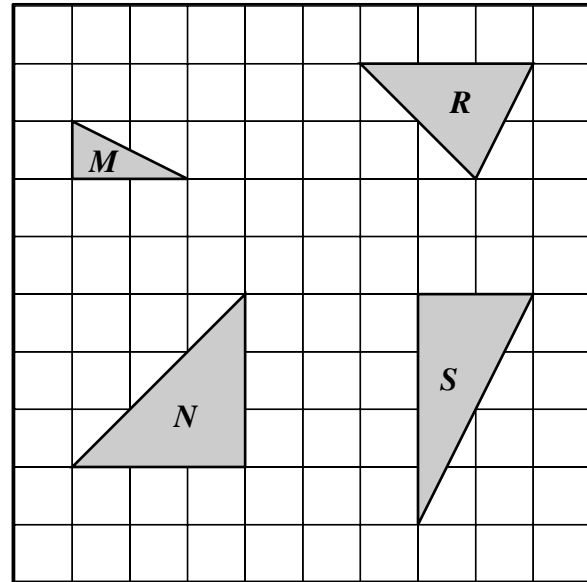
- A 47 minutes
- B 1 hour, 13 minutes
- C 13 hours, 13 minutes
- D 13 hours, 47 minutes

- 26 Which coordinates best describe the location of Mount Able?



- F (5, 6)
G (5, 5)
H (6, 5)
J (6, 6)

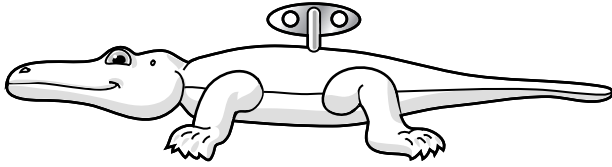
- 27 Four triangles are shown on the grid below.



Which two triangles appear to be similar?

- A M and S
B M and N
C N and S
D R and N

- 28 Use your inch ruler to help you answer this question.



Which is *closest* to the length of the toy alligator shown above?

F $3\frac{1}{8}$ in.

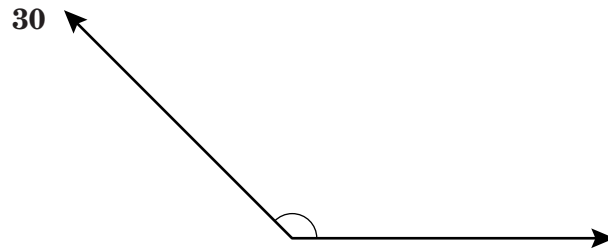
G $3\frac{1}{2}$ in.

H $4\frac{1}{8}$ in.

J $4\frac{1}{2}$ in.

- 29 Which of these would require finding the perimeter of something?

- A Buying enough fencing to go around your front yard
- B Buying enough carpet for the floor of your classroom
- C Buying enough paint to cover the door of your classroom
- D Buying a tablecloth big enough to cover a table



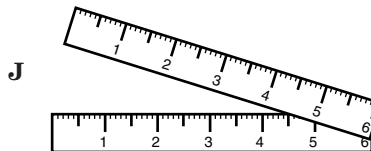
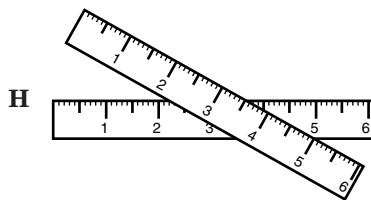
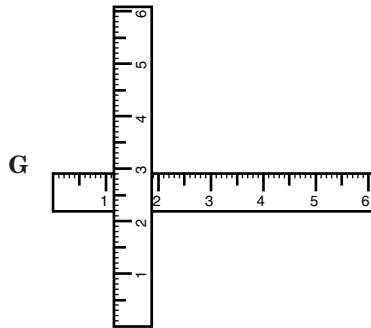
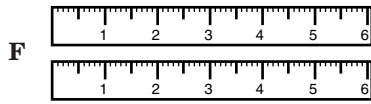
Which of the following describes the angle shown above?

- F Right
- G Acute
- H Obtuse
- J Straight

- 31 Which of the solid shapes listed below has *no* vertices?

- A Sphere
- B Pyramid
- C Cube
- D Cone

- 32 Which pair of rulers is best described as perpendicular?



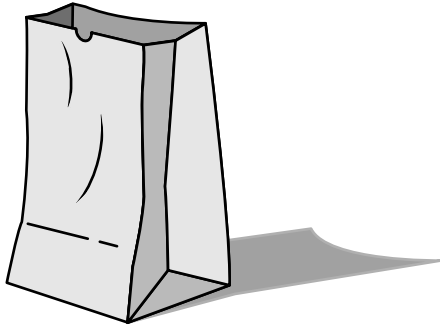
- 33 Irene has a group of counters like the ones pictured below. In the group are 9 counters with a star on them and 1 counter without a star.



If one counter is chosen from the group without looking, which of the following best describes the chances that it will be the one *without* a star?

- A Certain
- B Likely, but not certain
- C Unlikely, but not impossible
- D Impossible

- 34 Manuel has 9 milk chocolate candy bars and 1 dark chocolate candy bar in a bag. All the candy bars are the same size and shape.



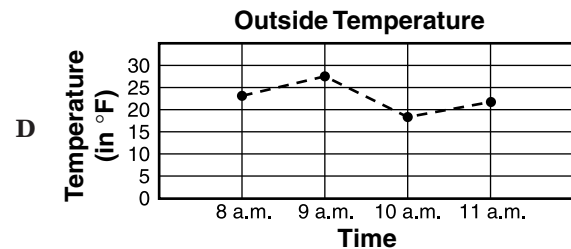
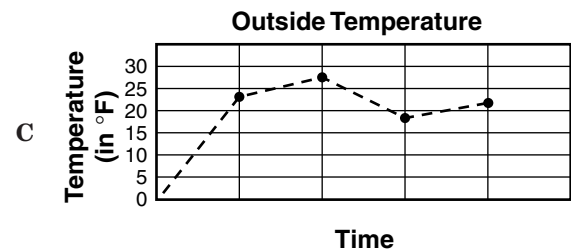
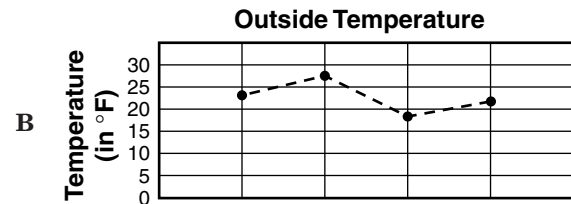
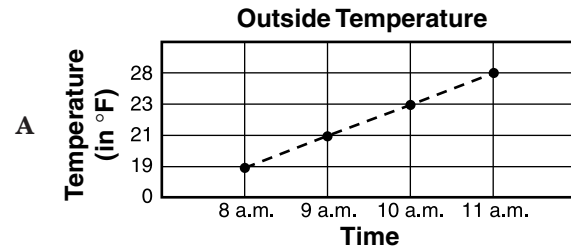
What is the probability that the first candy bar taken from the bag without looking will be milk chocolate?

- F $\frac{9}{1}$
- G $\frac{9}{10}$
- H $\frac{1}{9}$
- J $\frac{1}{10}$

- 35 Last winter, Julie recorded the outside temperature each hour for four hours. The table below shows the results.

Outside Temperature	
Time	Temperature (in °F)
8 a.m.	23°
9 a.m.	28°
10 a.m.	19°
11 a.m.	21°

Which of the following shows this information graphed correctly?



- 36 Stephanie's school has a tutoring program after school and on Saturdays. This lists the number of students who came to tutoring for the last two weeks.

14	35	22	28
25	30	43	16
39	41	24	30

Which of the following stem-and-leaf plots shows this same information?

F

Stem	Leaf
1	4, 6
2	2, 4, 5, 8
3	0, 0, 5, 9
4	1, 3

G

Stem	Leaf
1	4, 6
2	2, 4, 5, 8
3	0, 2, 5, 9
4	1, 3

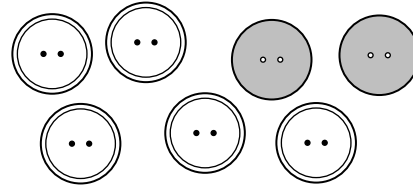
H

Stem	Leaf
1	4, 6
2	2, 4, 5, 8
3	5, 9
4	1, 3

J

Stem	Leaf
1	2
2	4
3	4
4	2

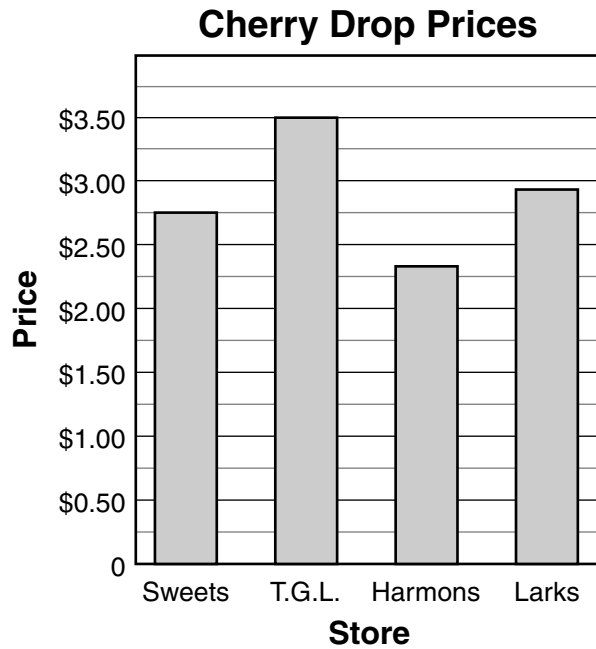
- 37 Andrew has these buttons to use for a design.



Which of the following questions about these buttons could you use probability to solve?

- A How many more white buttons than gray buttons does Andrew have?
- B How many buttons does Andrew have in all?
- C If Andrew gives 2 buttons to Cissy, how many will be left?
- D If Andrew picks 1 button without looking, what color is it most likely to be?

- 38 The graph below shows the price of a bag of cherry drops at four different stores.



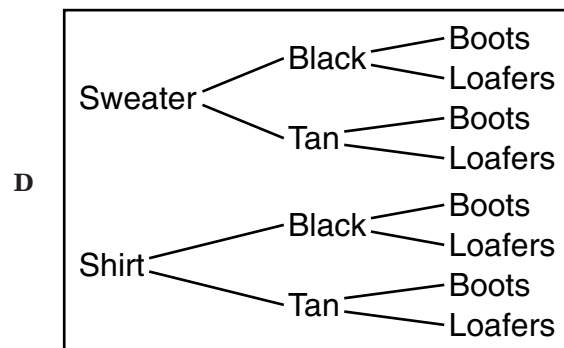
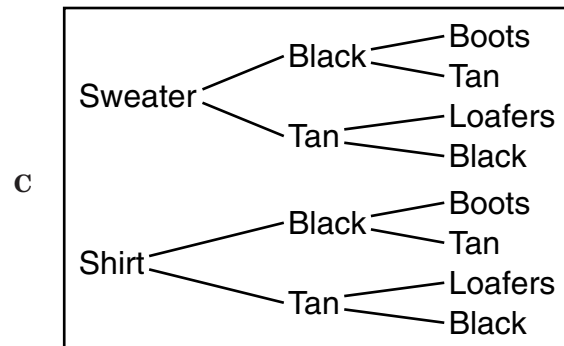
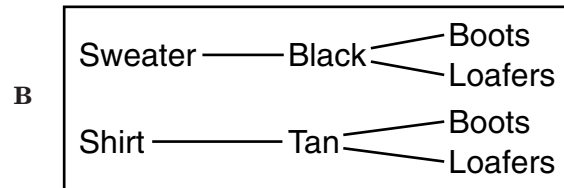
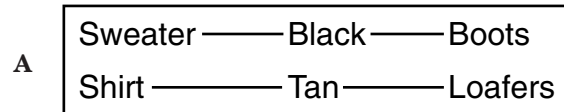
Which is *closest* to the price of a bag of cherry drops at Harmons?

- F \$2.20
G \$2.30
H \$2.50
J \$2.70

- 39 The chart below shows the choices Ms. Diego has for getting dressed.

Top	Pants	Shoes
Sweater Shirt	Black Tan	Boots Loafers

Which tree diagram shows all the possible combinations of 1 top, 1 color of pants, and 1 kind of shoes?



- 40 The table below shows the amount some plants grew over the same period of time.

Plant Growth	
Plant	Amount of Growth (in centimeters)
A	8
B	14
C	9
D	10
E	12
F	11
G	9
H	7

What is the range of this set of data?

- F 7 cm
- G 9 cm
- H 10 cm
- J 11 cm

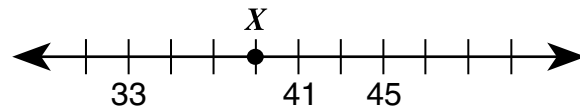
- 41 The table below shows the total cost of different numbers of notebooks.

Cost of Notebooks	
Number of Notebooks	Total Cost
1	\$3.50
2	\$7.00
3	\$10.50
4	\$14.00
5	\$17.50

Based on the information in the table, what will be the total cost of 10 notebooks?

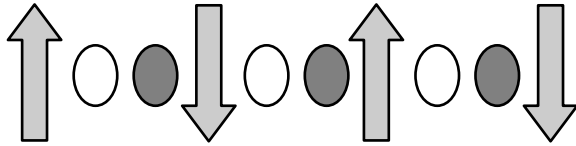
- A \$21.00
- B \$24.50
- C \$31.50
- D \$35.00

- 42 Which best describes the location of point X on the number line shown below?

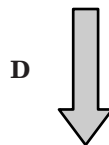
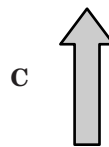


- F 36
- G 37
- H 39
- J 40

- 43 The first ten shapes in a pattern are shown below. Lionel is making the pattern by repeating the first six shapes in the same order as shown in the picture.



If Lionel continues the pattern in the same way, what will be the 16th shape in the pattern?



- 44 A number machine uses a rule to change numbers into different numbers. The table below shows what happened when different numbers went into the same number machine.

Input (x)	Output (y)
7	15
12	20
15	23
28	36

Which of the following could be the rule used by this number machine?

- F Multiply by 3, then subtract 6
- G Multiply by 2, then add 1
- H Add 5
- J Add 8

- 45 Which of the following goes in the box to make the statement below true?

$$(75 + 167) + 92 = \boxed{}$$

- A $75 + (167 \times 92)$
- B $92 + (167 + 75)$
- C $(92 + 75) + (92 + 167)$
- D $167 - (75 + 92)$

- 46 Which of the following goes in the box to make the statement below true?

$$(13 \times 8) \times 25 = \boxed{}$$

- F $(13 \times 25) + (13 \times 8)$
- G $(13 \times 25) + (8 \times 25)$
- H $13 \times (8 + 25)$
- J $13 \times (8 \times 25)$

- 47 If N represents a number, which of the following means “10 divided by a number”?

- A $10 - N$
- B $10 + N$
- C $10 \times N$
- D $10 \div N$

- 48 Which of these could be solved by using the open sentence $D + 2 = ?$

- F Lonnie earned \$2 more than Blanca. If D is the amount in dollars that Blanca earned, how much did Lonnie earn?
- G Stephen spent \$2 on a notebook. If D is the amount of money that he started with, how much does Stephen have left?
- H Diana earns \$2 each time she washes the family car. If D is the total amount of money that she earned last year by washing the car, how many times did she wash the car?
- J The math club makes \$2 on each box of dominoes that it sells. If D is the number of boxes of dominoes that the club sold, how much did it make in all?

- 49 The table shows the cost of cans of paint.

Number of Cans	Total Cost
1	\$6.00
2	\$12.00
3	\$18.00
4	\$24.00
5	?

How much would 5 cans of paint cost?

- A \$20.00
- B \$28.00
- C \$30.00
- D \$32.00

- 50 If L represents the number of lambs a farmer owned, which of the following could be used to find the number of lambs he had after selling three of the lambs?

F $L \div 3 = ?$

G $L \times 3 = ?$

H $L + 3 = ?$

J $L - 3 = ?$

