VIRGINIA STANDARDS OF LEARNING

Spring 2008 Released Test

GRADE 5
MATHEMATICS

Form M0118, CORE 1

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Directions

Read each question and choose the best answer. Then fill in the circle on your answer document for the answer you have chosen.

SAMPLE

What is 17 rounded to the nearest ten?

A   10
B   15
C   20
D   25

GO ON

1 $654 \div 8 =$

A   81 R6

B   83

C   84 R2

D   88

2 $1.32 - 0.86 =$

F   0.46

G   0.54

H   2.18

J   4.60

3 The temperature of the water in a swimming pool is 51°F. Since the freezing point of water is 32°F, how many degrees would the temperature of the water have to drop to reach the freezing point?

A   2°F

B   9°F

C   19°F

D   21°F

4 $2.4 \times 3.15 =$

    F   18.9

    G   7.56

    H   1.89

    J   0.756

5 $7\dfrac{4}{5} - \dfrac{1}{10} =$

    A $\dfrac{3}{5}$

    B $\dfrac{7}{10}$

    C $7\dfrac{3}{5}$

    D $7\dfrac{7}{10}$

6 $41.22 \div 2 =$

    F   15.11
    G 20.11
    H 20.61
    J   21.51

7 There are 26 birdhouses made at a factory each hour. What is the total number of birdhouses made at the factory in 8 hours?

    A 34
    B 64
    C 202
    D 208

8 $8,104 \div 2 =$

    F   452
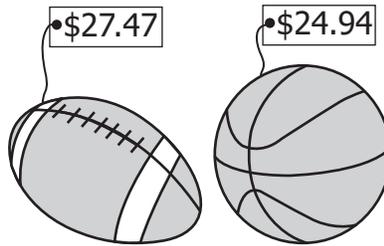   **G** 4,052
    H 4,502
    J   40,052

GO ON

9 Mr. Madrid bought 3 pairs of red mittens and 2 pairs of blue mittens. Each pair of mittens cost $10, including tax. What was the total cost of the mittens Mr. Madrid bought?

    A $5

    B $15

    C $50

    D $60

10 $5\frac{3}{4} - 2\frac{1}{2} =$

    F $2\frac{1}{4}$

    G $3\frac{1}{4}$

    H $3\frac{2}{2}$

    J $7\frac{5}{4}$

11 Jerry went to a local sporting goods store and bought a football and a basketball.

$27.47 $24.94

Since the prices included tax, how much did Jerry spend all together?

A $42.41

B $51.41

C $52.31

D $52.41

12   5$)\overline{8.5}$

F   1.5

G   1.7

H   15

J   17

Do not turn
the page until
you are told.

STOP

13 **Which fraction is equivalent to 0.1 ?**

    A $\dfrac{1}{1}$

    B $\dfrac{1}{10}$

    C $\dfrac{1}{100}$

    D $\dfrac{1}{1000}$

14 **Which is true?**

    F $97.856 > 98.765$

    G $96.587 > 96.785$

    H $97.568 > 97.685$

    J $95.658 > 95.568$

15 One of the smallest butterflies in the world has a wingspan of 1.5 centimeters. What is the value of the digit 5 in 1.5 ?

    A Five tenths

    B Five hundredths

    C Fifteen

    D Five

16 Which is read "three and forty-one thousandths"?

    F 3,410

    G 3.041

    H 3.401

    J 3.410

17 Which decimal is equivalent to $\dfrac{3}{5}$?

    A 0.3

    B 0.4

    C 0.6

    D 0.8

GO ON

18 **What is 2.48 rounded to the nearest tenth?**

    F   3.0

    G   2.5
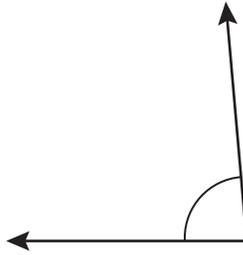
    H   2.4

    J   2.0

19 **Which group of numbers is listed in order from *least* to *greatest*?**

    A $\frac{3}{4}$, 0.6, 0.25, $\frac{1}{2}$

    B   0.6, $\frac{3}{4}$, $\frac{1}{2}$, 0.25

    C   0.25, $\frac{1}{2}$, 0.6, $\frac{3}{4}$

    D   0.25, $\frac{1}{2}$, $\frac{3}{4}$, 0.6

20 **How is 43.968 written in words?**

    F   Forty-three and nine six eight

    G   Forty-three and nine hundred sixty-eight

    H   Forty-three and nine hundred sixty-eight hundredths

    J   Forty-three and nine hundred sixty-eight thousandths
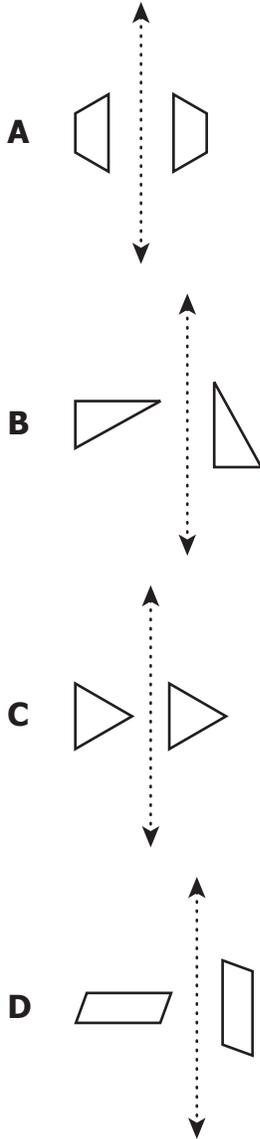
GO ON

21

Which is *closest* to the measure of the angle shown?

A   80°

B   85°

C   105°

D   110°

22   **The water in Martha's watering bucket is frozen. Which would *most* likely be the temperature of the water?**

F   100°C

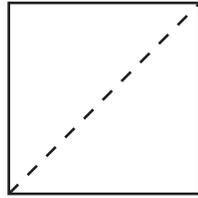**G**   50°C

H   25°C

J   0°C

23 **Which set of shapes shows a reflection (flip) over the dotted line?**

A

B

C

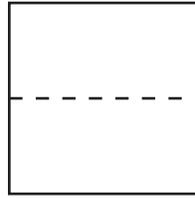D

24 **What is the perimeter of a square with a side 12 centimeters long?**

    F   24 cm

    G   48 cm

    H   72 cm

    J   144 cm

25 Charles cut each piece of paper pictured below on the dotted lines shown.
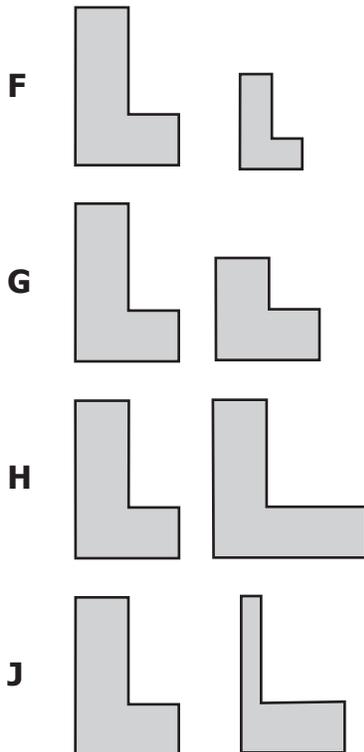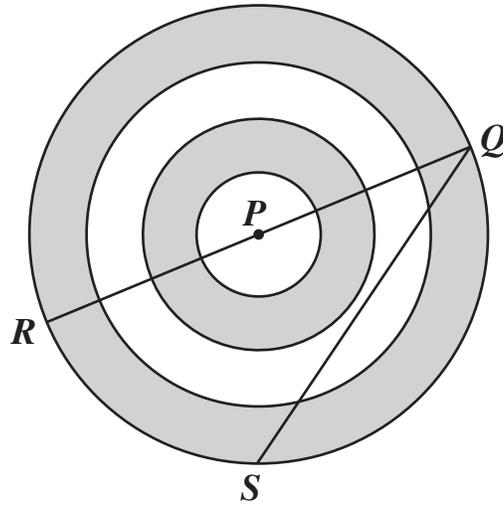

Paper 1   **Paper 2**

Which of the following are the shapes of the four pieces?

A   Triangles and rectangles
B   Squares and triangles
C   Rectangles and circles
D   Squares and hexagons

26 Which of the following appears to be a pair of similar shapes?

F

G

H

J

27 **Point P is the center of the circular target shown in the picture.**

Which appears to be a diameter of the circle?

A $\overline{PQ}$

B $\overline{SQ}$

C $\overline{PR}$

D $\overline{RQ}$

28 **Which unit could be used to record the length of a desk?**

F Inch

G Liter

H Pound

J Gram

GO ON

29 **Which geometric figure has one square base and triangular faces?**

    A   Cone

    B   Cube

    C   Cylinder

    D   Pyramid

30 **Jason drew this diagram. He needs to buy enough fencing to put around the dog's play pen.**

Dog's Play Pen
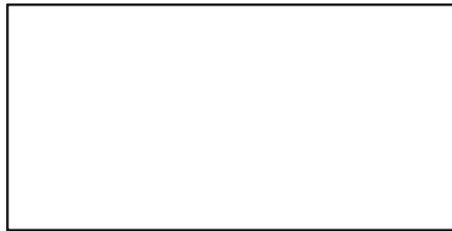
Which measure can Jason calculate to determine the amount of fencing he needs to buy?

    F   Area

    G   Mass

    H   Perimeter

    J   Volume

GO ON

31 Which figure appears to have only 1 pair of parallel sides?

A
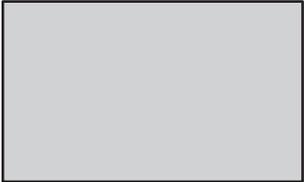
B

C

D
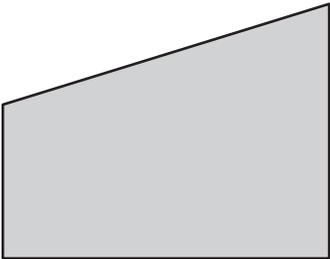
32 The picture shows five points on a grid.
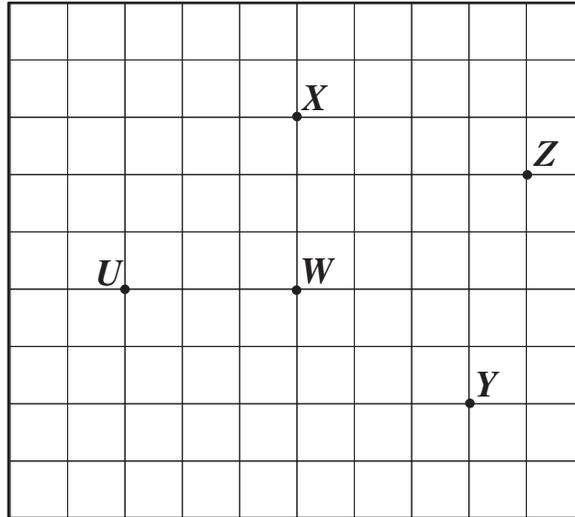
Which three points can be connected to form a right triangle?

F Points U, W, and Z

G Points W, Y, and Z

H Points X, W, and Z

J Points X, W, and U

GO ON

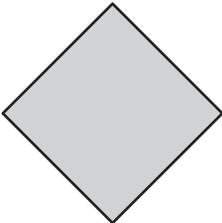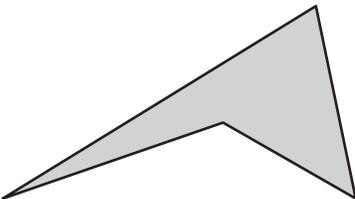**33**   On Saturday, the manager of a car wash kept a record of the number of cars that came to the car wash each hour. This lists the results.

15 42 34 26 20 31

46 15 43 29 54 37

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

A

Stem	Leaf
1	5, 5
2	6, 9
3	1, 4, 7
4	2, 5, 6
5	4

B

Stem	Leaf
1	2, 5
2	0, 6, 9
3	1, 4, 7
4	2, 5, 6
5	4

C

Stem	Leaf
1	5
2	6, 9
3	1, 4, 7
4	2, 5, 6
5	4

D

Stem	Leaf
1	5, 5
2	0, 6, 9
3	1, 4, 7
4	2, 3, 6
5	4

34 **Trent used the spinner shown to play a board game. Each section of the spinner is the same size.**
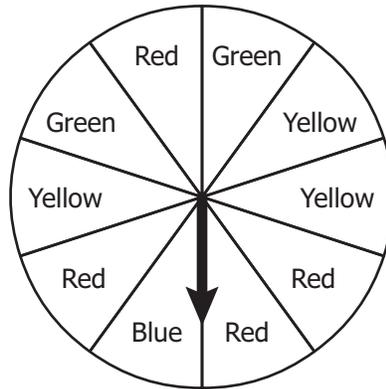
What is the probability the arrow will land on a section labeled green on Trent's first spin?

F 0.1

G 0.2

H 0.3

J 0.4

35 **The line graph shows Dana's distance from home one afternoon.**

Dana's Distance From Home
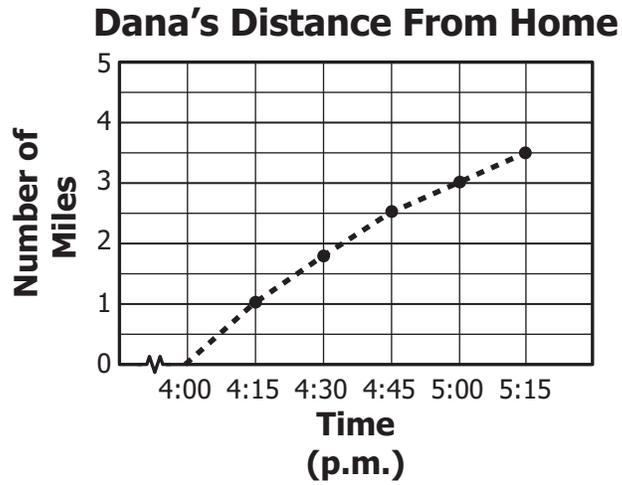
Which is *closest* to Dana's distance from home at 4:45 p.m.?

A   2 miles

B   2.5 miles

C   3 miles

D   3.5 miles

36 The picture below shows the price for each kind of birdhouse Nikos will sell at a craft fair.
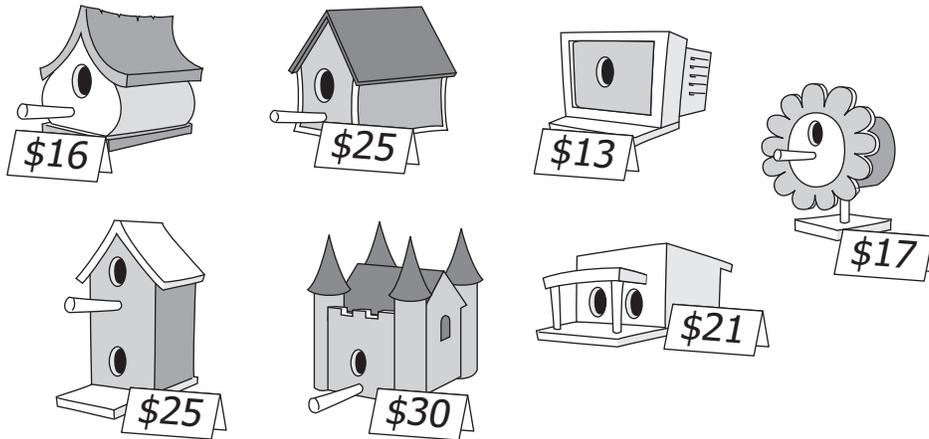
What is the mode price of the birdhouses?

F $17

G $21

H $25

J $30

37 **Mariko must write a report. The chart shows the different countries and topics from which she can choose.**

Class Report Choices

Country	Topic
France	Geography
Japan	Wildlife
Egypt	History

Which lists all the different combinations of 1 country and 1 topic Mariko can choose?

A
France, Geography
France, Wildlife
France, History
Japan, Geography
Japan, Wildlife
Japan, History
Egypt, Geography
Egypt, Wildlife
Egypt, History

B
France, Geography
France, History
Japan, Geography
Japan, Wildlife
Egypt, Geography
Egypt, History

C
France, Geography
France, History
Japan, Geography
Japan, Wildlife
Egypt, History

D
France, Geography
Japan, Wildlife
Egypt, History

38 The table shows the number of each color of marble Rodney has in a box.

Marbles

Color of Marble	Number
Red	14
Yellow	8
Blue	11

Which question about the marbles can Rodney use knowledge about probability to solve?

F   What is the total number of marbles in the box?

G   What is the chance of taking a yellow marble from the box on the first draw?

H   How many red marbles are in the box?

J   How many more blue marbles than red marbles are in the box?

39 **JoAnn recorded the daily high temperatures for one week in the table.**

Temperatures

Day	Temperatures °F
Monday	72°F
Tuesday	65°F
Wednesday	80°F
Thursday	74°F
Friday	85°F
Saturday	80°F
Sunday	90°F

What is the mean (average) of this data?

A 74°F

B 78°F

C 80°F

D 90°F

40 The table shows the number of tickets sold at an amusement park during one week.

Tickets Sold

Day	Number of Tickets
Monday	270
Tuesday	650
Wednesday	320
Thursday	380
Friday	740
Saturday	470
Sunday	510

What was the median number of tickets sold at the park during that week?

F 240

G 380

H 470

J 477

41 $z \div 4 = \square$

Which could be solved using this number sentence?

A Kim ate 4 times as many jellybeans as Zach. If z represents the number of jellybeans Zach ate, how many jellybeans did Kim eat?

B Zach made 4 fewer basketball shots than Kim. If z represents the number of shots Kim made, how many shots did Zach make?

C Zach made some cookies. He gave an equal number of cookies to 4 of his friends. If z represents the number of cookies Zach made, how many cookies did each friend get?

D Zach and Kim collected a total of 4 insects. If z represents the number of insects Zach collected, how many insects did Kim collect?

42 If k represents a number, which represents "23 times a number"?

    F $k + 23$

    G $23 \times k$

    H $k \div 23$

    J $23 - k$

43 Michael used a rule to make the number pattern shown.

$$1, \ 2, \ 4, \ 8, \ 16$$

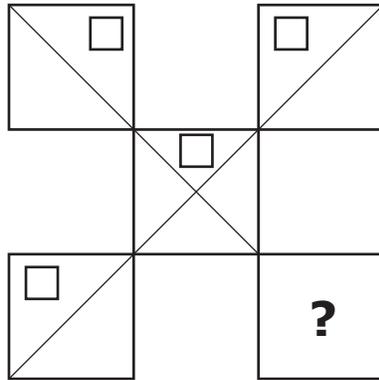If the pattern continues in the same way, what should Michael do to determine the 6th number?

    A   Multiply 16 by 2

    B   Multiply 8 by 2
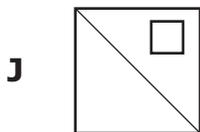
    C   Multiply 4 by 2

    D   Multiply 2 by 2

44 **When five tiles are laid flat as shown, this design has one line of symmetry.**

Which tile, without rotating, could correctly complete this design?

F

G

H

J

GO ON
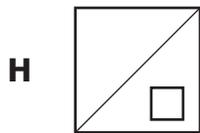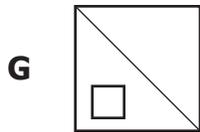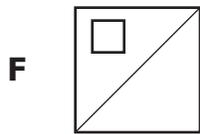
45 Greg is making a math puzzle. Greg writes, "w is an even number." Which of the following could represent the variable w ?

    A   12

    B   15

    C   25

    D   51

46 Tina has 5 more yellow flowers in her collection than blue flowers. If b represents the number of blue flowers in Tina's collection, which can be used to determine the number of yellow flowers in her collection?

    F $b+5=?$

    G $b-5=?$

    H $b\times5=?$

    J $b\div5=?$

47 If M represents a number, which of the following means "eight multiplied by a number"?

    A $M+6$

    B $M-6$

    C $8\div M$

    D $8\times M$

48 **A number machine uses a rule to change numbers. The picture below shows the results.**
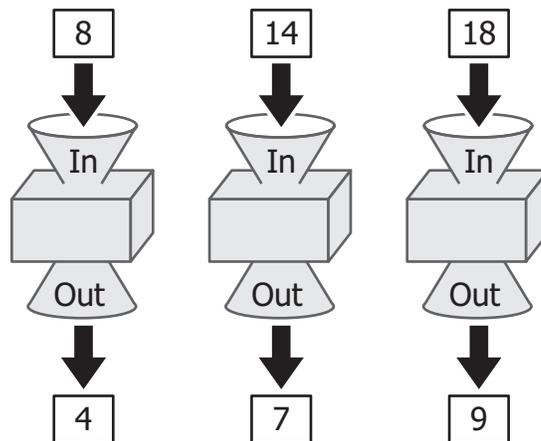
Which could be the rule used by this number machine?

F Divide by 2

G Subtract 4

H Multiply by 2

J Add 4

49 $c \times 6 = \square$

Which could be solved using this number sentence?

A Sarah bought 6 boxes of candy. Ryan also bought some boxes of candy. If c represents the number of boxes of candy Ryan bought, how many boxes of candy did Sarah and Ryan buy altogether?

B Sarah has 6 boxes of candy. Each box has the same number of candies inside. If c represents the number of candies in each box, how many candies does Sarah have in all?

C Sarah has 6 more boxes of candy than Ryan. If c represents the number of boxes Sarah has, how many boxes of candy does Ryan have?

D Sarah gave 6 of her boxes of candy to Ryan. If c represents the number of boxes Sarah had, how many boxes did she have left?

50 If P represents a number, which of the following expressions means 10 more than that number?

F $P \cdot 10$

G $10 \div P$

H $P + 10$

J $10 - P$

STOP

Answer Key-5072-M0118

Test Sequence Number	Correct Answer	Reporting Category	Reporting Category Description
1	A	002	Computation and Estimation
2	F	002	Computation and Estimation
3	C	002	Computation and Estimation
4	G	002	Computation and Estimation
5	D	002	Computation and Estimation
6	H	002	Computation and Estimation
7	D	002	Computation and Estimation
8	G	002	Computation and Estimation
9	C	002	Computation and Estimation
10	G	002	Computation and Estimation
11	D	002	Computation and Estimation
12	G	002	Computation and Estimation
13	B	001	Number and Number Sense
14	J	001	Number and Number Sense
15	A	001	Number and Number Sense
16	G	001	Number and Number Sense
17	C	001	Number and Number Sense
18	G	001	Number and Number Sense
19	C	001	Number and Number Sense
20	J	001	Number and Number Sense
21	B	003	Measurement and Geometry
22	J	003	Measurement and Geometry
23	A	003	Measurement and Geometry
24	G	003	Measurement and Geometry
25	A	003	Measurement and Geometry
26	F	003	Measurement and Geometry
27	D	003	Measurement and Geometry
28	F	003	Measurement and Geometry
29	D	003	Measurement and Geometry
30	H	003	Measurement and Geometry
31	D	003	Measurement and Geometry
32	J	003	Measurement and Geometry
33	D	004	Probability and Statistics
34	G	004	Probability and Statistics
35	B	004	Probability and Statistics
36	H	004	Probability and Statistics
37	A	004	Probability and Statistics
38	G	004	Probability and Statistics
39	B	004	Probability and Statistics
40	H	004	Probability and Statistics
41	C	005	Patterns, Functions, and Algebra
42	G	005	Patterns, Functions, and Algebra
43	A	005	Patterns, Functions, and Algebra
44	J	005	Patterns, Functions, and Algebra
45	A	005	Patterns, Functions, and Algebra
46	F	005	Patterns, Functions, and Algebra
47	D	005	Patterns, Functions, and Algebra
48	F	005	Patterns, Functions, and Algebra
49	B	005	Patterns, Functions, and Algebra
50	H	005	Patterns, Functions, and Algebra

Grade 5 Math, Core 1

If you get this many items correct:		Then your converted scale score is:
0		000
1		000
2		051
3		086
4		111
5		131
6		148
7		163
8		177
9		189
10		200
11		211
12		221
13		230
14		239
15		248
16		256
17		264
18		272
19		280
20		288
21		295
22		303
23		310
24		318
25		325
26		333
27		340
28		348
29		355
30		363
31		370
32		378
33		386
34		395
35		**403**
36		412
37		421
38		431
39		441
40		452
41		463
42		476
43		489
44		**505**
45		522
46		543
47		568
48		600
49		600
50		600