

Diagnostic and Placement Grade 6

Name _____

Date _____

This test contains 30 multiple-choice questions. Work each problem in the space on this page. Select the best answer. Write the letter of the answer on the blank at the right.

- 1** The table below shows the length of the hiking trails at a local park. Aaron hikes half of the blue trail. What distance did he hike?

1 _____

Hiking Trails	
Trail	Length (miles)
Red	1.09
Blue	1.86
Green	1.10
Yellow	1.28

- A** 0.5 mile **B** 0.93 mile **C** 1.86 miles **D** 3.72 miles

- 2** Candace is knitting a scarf. The scarf is 4.6 feet long. If she knits another 1.75 feet, how long will the scarf be?

2 _____

- F** 6.35 feet **G** 5.81 feet **H** 5.35 feet **J** 2.85 feet

- 3** Ms. Ayala had 152 pencils. She divided the number of pencils equally among 13 students. She kept the leftover pencils in her desk. What is the greatest number of pencils Ms. Ayala could have given each student?

3 _____

- A** 9 **B** 10 **C** 11 **D** 12

- 4** Kono divides the numerator and denominator of $\frac{48}{72}$ by the greatest common factor to simplify the fraction in one step. By what number does he divide?

4 _____

- F** 2 **H** 16
G 12 **J** 24

5 After January 1, Aleta has band practice every fourth day and swimming lessons every third day. If both programs end January 31, how many days in January will Aleta have both band practice and swimming lessons?

A 1 day

B 2 days

C 3 days

D 4 days

5 _____

6 In simplest form, what is the quotient of $\frac{1}{6} \div \frac{2}{9}$?

F $\frac{1}{27}$

G $\frac{2}{54}$

H $\frac{9}{12}$

J $\frac{3}{4}$

6 _____

7 Which sign makes the number sentence $-8 \square - 3$ true?

A $>$

B $<$

C $=$

D \geq

7 _____

8 A triangle has sides measuring 3.54 inches, 5.12 inches, and 2.30 inches. Add to find the perimeter of the triangle.

F 10.69 inches

G 10.96 inches

H 11.06 inches

J 11.96 inches

8 _____

9 For every 12 slices of pizza sold at Ping's Pizza Shop, 3 slices are pepperoni, 4 are sausage, and the rest are cheese. What is the ratio of pepperoni to cheese?

A 3:12

B 3:5

C 3:4

D 5:3

9 _____

10 Kara is training for a 5-kilometer race. On the first day of training, she runs 0.75 kilometer. What percent of the total distance does she run the first day of training?

F 5%

G 10%

H 15%

J 25%

10 _____

11 A 4-pack of batteries costs \$5.16. At this price, what is the cost of one battery?

A \$1.29

B \$1.49

C \$5.16

D \$20.64

11 _____

- 12 The table shows the cost of ride tickets at the fair. What is the unit rate for one ride ticket?

Number of Tickets	Cost
5	\$3.75
10	\$7.50
15	\$11.25
20	\$15.00

- F \$0.37 G \$0.55 H \$0.70 J \$0.75

12 _____

- 13 Kali earned \$40 for babysitting for 5 hours. At this rate, how much will she earn for babysitting for 7 hours?

- A \$8 B \$45 C \$47 D \$56

13 _____

- 14 Tia, Veronica, Pam, and Lily are sisters. Tia is 8 years old and she is 2 years older than Pam. Pam is 5 years younger than Veronica and Veronica is 4 years younger than Lily. Which list has the sisters in order from youngest to oldest?

- F Tia, Veronica, Pam, Lily
G Lily, Veronica, Tia, Pam
H Tia, Pam, Veronica, Lily
J Pam, Tia, Veronica, Lily

14 _____

- 15 The table below shows the cost for different numbers of tickets.

Number of Tickets	2	4	6	8	10
Cost	12	24	36	48	60

Based on the information in the table, which of the following statements is true?

- A Each ticket costs \$2.
B Each ticket costs \$6.
C The more tickets you buy the less each ticket costs.
D The more tickets you buy the greater each ticket costs.

15 _____

- 16 Edmundo bought 4 trading cards yesterday. He bought some more trading cards today. Now he has 12 trading cards. If n represents the number of trading cards Edmundo bought today, which equation is correct?

- F $4 + 12 = n$ H $n + 12 = 4$
G $4 + n = 12$ J $n + 4 = 16$

16 _____

17 Which of the following expressions is equivalent to $7(x + 3)$?

A $10 + x$

C $7x + 3$

B $7x + 21$

D $3x + 21$

17 _____

18 What is the solution to the equation $5 + b = 18$?

F $b = 5$

H $b = 13$

G $b = 8$

J $b = 23$

18 _____

19 Miguel practiced more than 5 hours for his first soccer game. Which inequality represents p , the amount of time Miguel practiced?

A $p > 5$

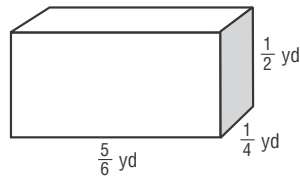
C $p = 5$

B $p < 5$

D $p \geq 5$

19 _____

20 A rectangular prism is shown below. What is the volume of the prism?



F $\frac{1}{2}$ yd³

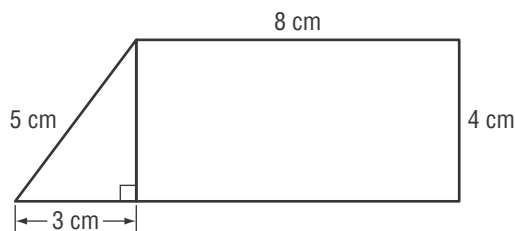
H $\frac{5}{24}$ yd³

G $\frac{5}{48}$ yd³

J $\frac{7}{12}$ yd³

20 _____

21 Look at the figure below.



21 _____

What is the area of the figure?

A 12 cm^2

C 38 cm^2

B 32 cm^2

D 42 cm^2

22 Lanu draws a rectangle that is 10 inches wide and 20 inches long. Which rectangle described below has the same area?

- F** 5 inches wide and 25 inches long
- G** 8 inches wide and 25 inches long
- H** 15 inches wide and 15 inches long
- J** 15 inches wide and 25 inches long

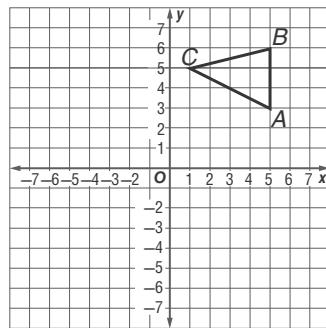
22 _____

23 A box has a square base with each side measuring 8 inches. The height of the box is 4 inches. What is the surface area of the box in cubic inches?

- A** 96 square inches
- B** 192 square inches
- C** 256 square inches
- D** 612 square inches

23 _____

24 On the graph below, what is the length of side AB ?



- F** 3 units
- G** 4 units
- H** 5 units
- J** 6 units

24 _____

25 Mrs. Brown has a flower garden in the shape of a parallelogram. The length of the base of the garden is 9.5 feet and the height is 4.2 feet. What is the area of the flower garden?

- A** 19.95 ft²
- B** 27.4 ft²
- C** 30.7 ft²
- D** 39.9 ft²

25 _____

26 Mrs. Esperanza's math class is playing a game using two spinners. One spinner has the colors red, blue, and green. The other spinner has the numbers 1, 2, 3, 4, 5, 6, 7, and 8. How many possible outcomes are there?

- F** 11
- G** 16
- H** 21
- J** 24

26 _____

- 27 Trent has a math quiz every Friday. The table below shows his quiz scores. What is the mode of Trent's scores?

27 _____

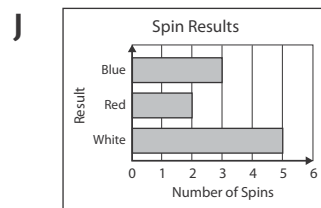
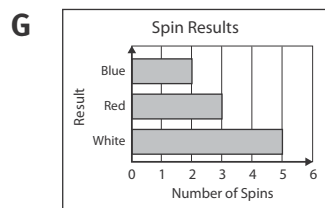
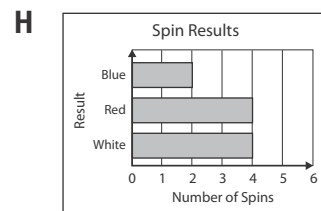
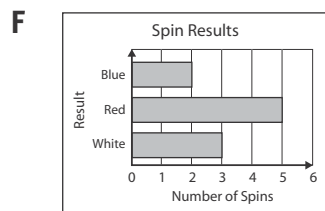
Trent's Math Quiz Scores							
Quiz	1	2	3	4	5	6	7
Score	97	88	78	77	82	57	88

- A 97 B 88 C 82 D 81

- 28 Kahlid spins a spinner 10 times. The results are shown in the tally chart below. Which of the following graphs show these results?

28 _____

Spin Results	
White	
Red	/
Blue	



- 29 What is the median of these data?

29 _____

67, 98, 78, 75, 83, 44, 98

- A 44 C 78
B 75 D 98

- 30 The number of points Ming scored in each basketball game this season are shown below. What is the mean number of points she scored?

30 _____

3	7	1	8	2	4	9	10	8	8
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- F 6 G 8 H 9 J 10