

# Math Diagnostic Test

Level: H Name: \_\_\_\_\_

Grade: \_\_\_\_\_

Date: \_\_\_\_\_

1. In the number 273,408, what is the value of the digit 7?

- A tens                      B thousands  
C ten thousands        D hundreds

2. Estimate

$$\begin{array}{r} 3,045 \\ 2,984 \\ + 2,653 \\ \hline \end{array}$$

- A 11,000                      B 10,000  
C 9,000                        D 8,000

3. Round 3,492,869 to the nearest hundred thousand.

- A 3,000,000  
B 4,000,000  
C 3,400,000  
D 3,500,000

4.  $\frac{2}{7} + \frac{3}{8}$

- A  $\frac{5}{15}$                               B  $\frac{5}{7}$   
C  $\frac{37}{56}$                              D  $\frac{39}{78}$

5. What is  $5\frac{23}{100}$  in decimal form?

- A 5.23                              B 523  
C 52.3                              D 5.023

6.  $\frac{4}{9} - \frac{5}{12}$

- A  $\frac{9}{36}$                               B  $\frac{1}{36}$   
C  $\frac{1}{12}$                                 D  $\frac{1}{9}$

7. List all factors common to 14, 28, 42, and 70.

- A 1, 2, 7, 14  
B 1, 2, 4, 7, 14  
C 1, 2, 4, 6, 7, 14, 28  
D 1, 2, 6, 7, 14, 21, 70

8. Round 4.96 to the nearest tenth.

- A 4.9                                B 4.0  
C 5.9                                D 5.0

9. List the prime numbers between 8 and 28.

- A 9, 11, 13, 17, 19  
B 9, 11, 13, 19, 23  
C 11, 13, 17, 19, 23  
D 13, 17, 19, 23, 27

10.  $18 \overline{)10,404}$

- A 567                                B 587  
C 578                                D 579

11.  $52.29 \times 6.4$

- A 3346.56      B 334.656  
C 58.69      D 45.89

12.  $754 \times 36 =$

- A 26,144      B 26,044  
C 27,044      D 27,144

13.  $45.9 \div 7.5$

- A 61.2      B 38.4  
C 6.12      D 6.02

14.  $\frac{7}{32} \times \frac{16}{21}$

- A  $\frac{1}{6}$       B  $\frac{16}{32}$   
C  $\frac{23}{53}$       D  $1\frac{3}{5}$

15. Order the following from *greatest to least*

**7.08, 7.8, 8.7, 8.07**

- A 8.7, 8.07, 7.8, 7.08  
B 8.07, 8.7, 7.08, 7.8  
C 7.08, 7.8, 8.07, 8.7  
D 7.8, 7.08, 8.7, 8.07

16. Divide. Write the answer in simplest form.

$$\frac{2}{3} \div \frac{4}{5}$$

- A  $\frac{5}{12}$       B  $\frac{8}{15}$   
C  $\frac{5}{6}$       D  $1\frac{1}{5}$

17.  $15 \times 37 \times 7 =$

- A 555      B 3,765  
C 3,885      D 3,975

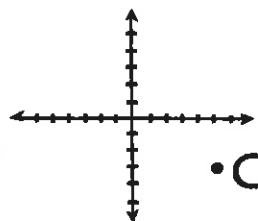
18.  $48 \div 4 - 3 \times (5 - 2) + 7$

- A 34      B 33  
C 10      D 28

19. Which is equivalent to  $\frac{3}{4}$ ?

- A  $\frac{2}{3}$       B  $\frac{13}{14}$   
C  $\frac{4}{3}$       D  $\frac{12}{16}$

20. Give the coordinates of point C



- A (5,3)      B (3,5)  
C (-3,-5)      D (5,-3)

21. Solve for  $a$ :

$$a \times (10 \div 5) = (3 \times 7) + (3 \times 5)$$

- A 36                      B 13  
C 18                      D 72

22. Convert  $\frac{3}{8}$  to a decimal

- A 0.315                  B 0.815  
C 0.375                  D  $2.\bar{6}$

23. 8.624 kilometers = \_\_\_\_\_ meters.

- A 0.008624              B 0.8624  
C 862.4                  D 8624

24. Jeff's driveway is 25 yards long.  
What is that length in feet?

- A 85                      B 75  
C 69                      D 72

25. Which line segments are parallel?



26. 4.45 is equivalent to:

- A  $4\frac{5}{10}$                   B  $4\frac{9}{20}$   
C  $4\frac{4}{9}$                       D  $4\frac{4}{7}$

27. Edwin spent \$ 4.98 for paints, \$ 2.35 for paint brushes, and \$ 2.99 for a sketch pad. How much did she spend in all?

- A \$ 9.65                  B \$ 10.32  
C \$ 9.97                  D \$ 10.67

28. Daniel is driving from Los Angeles to New York, which is about 3,600 miles. He has driven 1,980 miles in 4 days. How many miles has he averaged per day?

- A 1,620                  B 900  
C 495                      D 485

29. Which of the following is true about the area of a rectangle with length  $x$  and width  $y$ ?

- A Area =  $x + y$           B Area =  $2x + 2y$   
C Area =  $x \times y$           D Area =  $2x \times 2y$

30.  $(44 \div 4) \times (2 + 4^2)$

- A 110                      B 176  
C 198                      D 215

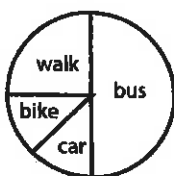
31. What is the probability of rolling a number greater than 3 on a number cube labeled 1 through 6?

- A  $\frac{1}{2}$                           B  $\frac{1}{3}$   
C  $\frac{1}{6}$                           D  $\frac{3}{7}$

32. What kind of graph would be best to compare the number of goals scored during a season by players on a soccer team?

- A Bar graph                      B Line graph  
C Pie graph                        D Scatter plot

For questions 33-34, use the pie graph below.



33. What fraction of 5<sup>th</sup> graders rides their bikes to school?

- A  $\frac{1}{4}$                                   B  $\frac{1}{5}$   
C  $\frac{1}{6}$                                   D  $\frac{1}{8}$

34. How do most of the 5<sup>th</sup> graders get to school?

- A bike                                B car  
C bus                                 D walk

35. The school nurse weighed Jenny. She weighed 65 lb. Her older brother Ryan weighed 14 pounds less than twice Jenny's weight. How much did Ryan weigh?

- A 51                                  B 116  
C 102                                D 130

36. Mrs. Henry drove  $\frac{2}{3}$  mi to take Mike to school,  $\frac{1}{4}$  mi to the grocery store, and  $\frac{5}{6}$  mi to her office. How far did she drive?

- A  $\frac{11}{12}$  mi                      B  $1\frac{11}{12}$  mi  
C  $1\frac{3}{4}$  mi                      J  $2\frac{1}{3}$  mi

37. Tom wants to put 60 apples into plastic bags. If each plastic bag can hold up to 8 apples, at *least* how many bags will he need?

- A 5                                    B 6  
C 7                                    D 8

38. Susie left the park at 3:45 pm and got home at 4:27 pm. How long did it take her to get home?

- A 1 hour and 18 minutes  
B 18 minutes  
C 42 minutes  
D 1 hour and 42 minutes

39. What is the LCM of 8 and 12?

- A 4                                    B 6  
C 24                                 D 96

40. What is the GCF of 27 and 54?

- A 3                                    B 9  
C 27                                 D 54

41. What is the prime factorization of 52?

- A  $2^2 \times 13$                       B  $2 \times 26$   
C  $24 \times 13$                       D  $2 \times 3 \times 7$

42. What is 20% of 300?

- A 20                      B 0.60  
C 60                        D 0.20

43. What is  $\frac{2}{3}$  of 90?

- A 18                        B 180  
C 30                        D 60

44. In a class of 31 students, there are 15 boys.  
What is the ratio of boys to girls?

- A 15:31                    B 16:15  
C 31:15                    D 15:16

45. The sum of the angle measures in a triangle  
is \_\_\_\_\_

- A  $90^\circ$                       B  $270^\circ$   
C  $180^\circ$                     D  $360^\circ$

46. Which of the following quadrilaterals has  
four right angles?

- A Parallelogram        B Rhombus  
C Rectangle             D Trapezoid

47. A spinner has 8 equal sections if 2 of them  
are red, what percent of the spinner is not  
red?

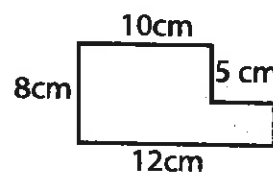
- A 2%                        B 25%  
C 75%                      D 80%

48. Which equation represents the functions.

x	0	5	10	15	20
y	6	11	16	21	26

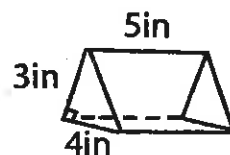
- A  $y = x + 6$               B  $y = 6x$   
C  $y = x \div 6$              D  $y = x + 6$

49. Find the area and perimeter of each figure



- A  $A = 86 \text{ cm}^2$      $P = 40 \text{ cm}$   
B  $A = 40 \text{ cm}^2$      $P = 86 \text{ cm}$   
C  $A = 96 \text{ cm}^2$      $P = 30 \text{ cm}$   
D  $A = 80 \text{ cm}^2$      $P = 40 \text{ cm}$

50. Find the volume.



- A  $15 \text{ in.}^3$                 B  $20 \text{ in}^3$   
C  $30 \text{ in}^3$                 D  $60 \text{ in}^3$

