

## NUMBERS & OPERATIONS

- \_\_\_\_\_ 1. Round 23.65 to the nearest tenth.
- A. 23.7                      B. 23.6                      C. 23.65                      D. 23.66
- \_\_\_\_\_ 2. Round 10.3413 to the nearest hundredth.
- A. 10.33                      B. 10.34                      C. 10.341                      D. 10.35
- \_\_\_\_\_ 3. Round 15.8787 to the nearest thousandth.
- A. 15.9                      B. 15.88                      C. 15.878                      D. 15.879
- \_\_\_\_\_ 4. Which of the following sets of decimals is in order from least to greatest?
- A. 4.613, 4.615, 4.62, 4.625                      B. 5.23, 5.233, 5.238, 5.234
- C. 6.08, 6.1, 6.091, 6.22                      D. 7.92, 7.89, 8.1, 8.55
- \_\_\_\_\_ 5. Which of the following sets of decimals is in order from least to greatest?
- A. 1.01, 1.001, 1.0001, 1.1                      B. 2.34, 2.891, 2.888, 2.933
- C. 3.001, 3.0091, 4.015, 4.03                      D. 4.831, 4.967, 4.953, 5.234
- \_\_\_\_\_ 6. For the day, Maya ate a granola bar with 210 calories, a sandwich with 480 calories, two cookies that are 130 calories each, and pasta with 570 calories. About how many calories did Maya consume?
- A. 1,390 calories                      B. 1,520 calories
- C. 12,180 calories                      D. 12,210 calories
- \_\_\_\_\_ 7. Mike bought 5 cans of soup at \$0.99 each, 3 frozen dinners at \$2.79 each, and salad for \$2.75. About how much did he spend?
- A. \$6.53                      B. \$10.49
- C. \$16.07                      D. \$12.11
- \_\_\_\_\_ 8. Mike bought a pair of pants for \$33.82 and a shirt for \$15.95. What is his total without tax?
- A. \$49.77                      B. \$48.77
- C. \$48.18                      D. \$17.87

- \_\_\_\_\_9. Ellen bought a dress for \$23.99 and a pair of shoes for \$31.05. If she paid with a \$100 bill how much change will she get?
- A. \$55.04                      B. \$155.04  
C. \$44.96                      D. \$54.94
- \_\_\_\_\_10. Aaron and Michelle went out to lunch. Their check was \$34.80 and they left \$7 for a tip. If they paid with a \$50 bill how much change will they get back?
- A. \$41.80                      B. \$15.20  
C. \$8.20                      D. \$27.80
- \_\_\_\_\_11. Ian earns \$8.25 per hour and works 32 hours each week. How much does he earn per week?
- A. \$264.00                      B. \$41.25  
C. \$257.80                      D. \$262.90
- \_\_\_\_\_12. Julie earns \$45 per hour tutoring math students' part time. If she works 9.5 hours in one week, how much will she earn?
- A. \$47.37                      B. \$85.50  
C. \$405.00                      D. \$427.50
- \_\_\_\_\_13. Nancy bought 2.5 lbs of nuts for \$8.75. How much did she pay per pound?
- A. \$21.88                      B. \$3.50  
C. \$2.91                      D. \$4.50
- \_\_\_\_\_14. If six pens cost \$8.70, how much does each pen cost?
- A. \$52.20                      B. \$14.50  
C. \$0.52                      D. \$1.45
- \_\_\_\_\_15. Which fraction is the smallest?
- A.  $\frac{1}{2}$                       B.  $\frac{2}{3}$                       C.  $\frac{3}{4}$                       D.  $\frac{1}{5}$
- \_\_\_\_\_16. Which fraction is the biggest?
- A.  $\frac{3}{5}$                       B.  $\frac{1}{8}$                       C.  $\frac{3}{4}$                       D.  $\frac{5}{6}$

\_\_\_\_\_17. Which of the following sets of fractions is in order from least to greatest?

A.  $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}$

B.  $\frac{1}{4}, \frac{2}{3}, \frac{3}{5}, \frac{4}{7}$

C.  $\frac{1}{4}, \frac{1}{6}, \frac{1}{8}, \frac{1}{10}$

D.  $\frac{1}{2}, \frac{2}{3}, \frac{4}{9}, \frac{9}{10}$

\_\_\_\_\_18. Sara bought  $2\frac{1}{2}$  pounds of turkey and  $3\frac{3}{4}$  pounds of ham. How much meat did she buy?

A.  $5\frac{4}{6}$  pounds

B.  $5\frac{1}{2}$  pounds

C. 6 pounds

D.  $6\frac{1}{4}$  pounds

\_\_\_\_\_19. Cindy filled her car with  $11\frac{1}{2}$  gallons of gas the first week and  $12\frac{1}{3}$  gallons the second week. How many gallons of gas did she buy?

A.  $23\frac{2}{5}$  gallons

B.  $23\frac{3}{6}$  gallons

C.  $23\frac{5}{6}$  gallons

D.  $23\frac{1}{6}$  gallons

\_\_\_\_\_20. Mario had  $4\frac{2}{3}$  quarts of oil in a can. If he puts  $2\frac{1}{2}$  in his car how much is left in the oil can?

A. 2 quarts

B.  $2\frac{1}{6}$  quarts

C.  $2\frac{1}{2}$  quarts

D.  $2\frac{1}{12}$  quarts

\_\_\_\_\_21. Lara needed a total of  $5\frac{1}{4}$  yard of material to make a jacket. If she already had  $3\frac{1}{2}$  yards, how many more does she need to buy?

A. 2 yards

B.  $2\frac{1}{4}$  yards

C.  $1\frac{3}{4}$  yards

D.  $2\frac{3}{4}$  yards

\_\_\_\_\_22. In order to sew a new blanket, Mary needs 4 feet of fabric. So far, Mary has collected  $\frac{1}{2}$  yard,  $\frac{2}{3}$  yard, and  $\frac{4}{5}$  yard of fabric pieces. How many more yards of fabric does Mary need.

A.  $\frac{7}{10}$  yards

B.  $\frac{7}{30}$  yards

C.  $1\frac{29}{30}$  yards

D.  $2\frac{1}{30}$  yards

\_\_\_\_\_ 23. What is  $\frac{1}{2} \cdot \frac{1}{4}$ ?

A.  $\frac{1}{8}$

B.  $\frac{1}{2}$

C. 8

D. 2

\_\_\_\_\_ 24. Maria earned \$80.00 babysitting. If she spent  $\frac{2}{5}$  of it on a new outfit, how much did the outfit cost?

A. \$16.00

B. \$32.00

C. \$8.00

D. \$160.00

\_\_\_\_\_ 25. The cheerleading team brought 400 cookies to sell for a fund-raiser. Three-fourths of them sold. How many did they sell?

A. 300 cookies

B. 100 cookies

C. 500 cookies

D. 134 cookies

\_\_\_\_\_ 26. It took  $\frac{3}{4}$  of an hour to walk 2 miles to school. What is his average rate of speed in miles per minute? (Hint use  $d = rt$ )

A. 90 miles per minute

B.  $\frac{1}{45}$  miles per minute

C. 45 miles per minute

D.  $\frac{2}{45}$  miles per minute

\_\_\_\_\_ 27. It took  $\frac{2}{3}$  of an hour to walk 5 miles to school. What is his average rate of speed in miles per minute? (Hint use  $d = rt$ )

A. 80 miles per minute

B. 40 miles per minute

C.  $\frac{1}{16}$  miles per minute

D.  $\frac{1}{8}$  miles per minute

\_\_\_\_\_ 28. At a high school,  $\frac{3}{5}$  of students participate in extra-curricular activities. Of these students,  $\frac{2}{3}$  of them participate in sports. There are 3,500 students attending this school. How many total students participate in sports?

A. 2,100 students

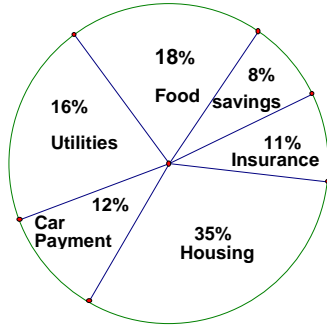
B. 4,433 students

C. 1,400 students

D. 2,333 students

- \_\_\_\_\_29. At a college,  $\frac{2}{5}$  of the students are in a sorority or fraternity. Of these students,  $\frac{1}{5}$  of them have jobs. If there are 10,000 students, how many total students have jobs?
- A. 6,000 students                      B. 4,000 students  
C. 1,000 students                      D. 800 students
- \_\_\_\_\_30. Eighty five percent of Ms. Foresta's class passed the Chapter 9 Test. Express this percent as a fraction.
- A.  $\frac{17}{20}$                                       B.  $\frac{15}{20}$   
C.  $\frac{8}{10}$                                       D.  $\frac{19}{20}$
- \_\_\_\_\_31. Seventy eight percent of seniors went to the prom. Express this percent as a fraction.
- A.  $\frac{34}{50}$                                       B.  $\frac{78}{50}$   
C.  $\frac{23}{50}$                                       D.  $\frac{39}{50}$
- \_\_\_\_\_32. On Jack's last test he received a 13 out of 20. What percent of the questions did Jack answer correctly?
- A. 65%                                      B. 35%  
C. 153%                                      D. 61%
- \_\_\_\_\_33. On Ms. Maddy's last test, twenty eight out of thirty five students passed. What percent of students failed?
- A. 57%                                      B. 43%  
C. 80%                                      D. 20%
- \_\_\_\_\_34. What is 6% of 200?
- A. 12    B. 120  
C. 1200                                      D. 12000

35. The following circle graph shows the breakdown of Nicole's monthly budget. If Nicole earned \$3,500 last month, how much did she put into savings?



- A. \$240  
 B. \$280  
 C. \$437  
 D. \$28,000

36. The Comer's total monthly budget is \$4,000 of which 15% is used for food, 50% is used for housing, 10% for utilities, 6% is used for entertainment, and 10% for transportation. If the remaining amount is invested, how much money do the Comer's invest monthly?

- A. \$360  
 B. \$364  
 C. \$400  
 D. \$760

37. Matt's free-throw average for basketball season is 75%. Based on this average, how many free throws out of 40 can Mike be expected to make?

- A. 10 free throws  
 B. 20 free throws  
 C. 36 free throws  
 D. 30 free throws

38. Matt purchased an iPod for \$210. The store has a sales tax rate of 7%. What was Matt's total purchase?

- A. \$14.70  
 B. \$217.20  
 C. \$224.70  
 D. \$211

39. Mark worked eight hours yesterday. If Mark makes \$9.50 an hour plus 3% commission, how much will he make if he had \$430 in sales?

- A. \$121.00  
 B. \$76.00  
 C. \$133.90  
 D. \$88.90

40. David bought the following items at the store:

1 gallon of milk	\$2.30
2 lbs of steak	\$7.45
1 package of potatoes	\$2.25
1 Ben & Jerry's Ice cream	\$3.80

If he paid 5% sales tax, what was the total cost of his purchase?

- A. \$15.80  
 B. \$16.59  
 C. \$23.25  
 D. \$24.41

- \_\_\_\_\_ 41. Adam has borrowed \$800 from his bank for 2 years at an annual rate of 7%. Use the formula  $I = prt$  to find the amount of interest he will pay. ( $I$  = Interest,  $p$  = principle,  $r$  = rate, and  $t$  = time)
- A. \$11.20  
B. \$1.12  
C. \$112.00  
D. \$56.00
- \_\_\_\_\_ 42. A snowboard is on sale for 29% off the original price. The original price of the board is \$395. What is the best estimate of the sale price of the snowboard?
- A. \$114.55  
B. \$280.45  
C. \$383.54  
D. \$336.00
- \_\_\_\_\_ 43. What is the total cost of a video game that has a 20% discount and sales tax is 5% if its original price is \$150?
- A. \$187.50  
B. \$172.50  
C. \$120.00  
D. \$126.00
- \_\_\_\_\_ 44. The original price of a pair of shoes is \$58. The store marked them up by 10%. Then they went on sale for 10% off. What is the current price?
- A. \$58.00  
B. \$69.60  
C. \$59.16  
D. \$57.42
- \_\_\_\_\_ 45. Kate purchased a snow board for \$625. In addition, she paid sales tax of \$50. What was the sales tax rate?
- A. 0.08%  
B. 0.125%  
C. 5%  
D. 8%
- \_\_\_\_\_ 46. Twenty five is what percent of two hundred?
- A. 12.5%  
B. 8%  
C. 50%  
D. 25%
- \_\_\_\_\_ 47. Brian made \$700 commission on an \$8000 car. What percent commission did he receive?
- A. 8.75%  
B. 9.59%  
C. 5.6%  
D. 11.4%

- \_\_\_\_\_48. Jasmine started a savings account with \$100. The first week she had it she withdrew \$15 and deposited \$50. The second week she had it she withdrew \$26. The third week she deposited \$75 and withdrew \$60. How much does she have left after the third week?
- A. \$326                                      B. \$124  
C. \$126                                      D. \$108
- \_\_\_\_\_49. A submarine dives 540 feet below the surface of the ocean. After it climbs 250 feet, what is the depth of the submarine?
- A. -290 ft                                      B. 290 ft  
C. -790 ft                                      D. 790 ft
- \_\_\_\_\_50. Simplify  $8 + 4^2 \times 2 - 6$ .
- A. 282                                      B. 18                                      C. 42                                      D. 34
- \_\_\_\_\_51. Simplify  $2^3 + (7 + 2)^2 \div 3$ .
- A. 35                                      B. 29                                      C. 20                                      D. 56
- \_\_\_\_\_52. Which expression is equivalent to 36?
- A.  $3 \times 17 - 5$                               B.  $3 \times 8 + 12$                               C.  $30 + 0 \times 6$                               D.  $3 \times 12 + 6$
- \_\_\_\_\_53. Which list of numbers is all prime numbers?
- A. {1, 2, 3, 5}                              B. {2, 3, 5, 7}                              C. {3, 5, 7, 9}                              D. {5, 7, 9, 11}
- \_\_\_\_\_54. In the repeating decimal  $0.\overline{25348}$ , what is the digit in the 15<sup>th</sup> decimal place?
- A. 2                                      B. 5                                      C. 4                                      D. 8
- \_\_\_\_\_55. In the repeating decimal  $0.\overline{63851}$ , what is the digit in the 24<sup>th</sup> decimal place?
- A. 3                                      B. 8                                      C. 5                                      D. 2
- \_\_\_\_\_56. It takes Mike 6 minutes to run a lap and it takes Kevin 4 minutes to run a lap. After how many minutes are they at the same point?
- A. 6                                      B. 12                                      C. 24                                      D. 36
- \_\_\_\_\_57. Three busses leave a station at the same time. One bus comes back in 8 minutes, the second in 6 minutes, and the third bus in 5 minutes. If the busses left at 11 a.m. then what time is the next time they will all be at the station at the same time?
- A. 1 pm                                      B. 3 pm                                      C. 5 pm                                      D. 6 pm



\_\_\_\_\_58. Express 325,000,000 in scientific notation.

A.  $3.25 \times 10^8$

B.  $325 \times 10^6$

C.  $3.25 \times 10^{-8}$

D.  $32.5 \times 10^7$

\_\_\_\_\_59. Express 0.00004562 in scientific notation.

A.  $4.562 \times 10^8$

B.  $4.562 \times 10^5$

C.  $4.562 \times 10^{-5}$

D.  $4562 \times 10^{-8}$

\_\_\_\_\_60. Express  $5.3 \times 10^3$  in standard form.

A. 53,000

B. 5,300

C. 0.00053

D. 0.0053

\_\_\_\_\_61. Express  $2.45 \times 10^{-4}$  in standard form.

A. 24,500

B. 2,450,000

C. 0.0000245

D. 0.000245

Numbers & Operations

Key

1. A  
2. B  
3. D  
4. A  
5. C  
6. B  
7. C  
8. A  
9. C  
10. C  
11. A  
12. D  
13. B  
14. D  
15. D

16. D  
17. A  
18. D  
19. C  
20. B  
21. C  
22. D  
23. A  
24. B  
25. A  
26. D  
27. D  
28. C  
29. D  
30. A

31. D  
32. A  
33. D  
34. A  
35. B  
36. A  
37. D  
38. C  
39. D  
40. B  
41. C  
42. B  
43. D  
44. D  
45. D

46. A  
47. A  
48. B  
49. A  
50. D  
51. A  
52. B  
53. B  
54. D  
55. C  
56. B  
57. A  
58. A  
59. C  
60. B  
61. D