

1. Write as a whole number using digits: two hundred five thousand, six hundred seventeen.

$$205,617$$

2. Round the above answer to the nearest ten thousand.

$$210,000$$

3. Simplify:  $(-4)^2$

$$16$$

4. Simplify  $-4^2$

$$-16$$

5. Simplify:  $-32 \div 2 \cdot (8 - 6) - 2^3$

$$-32 \div 2 \cdot (2) - 8$$

$$-16 \cdot 2 - 8$$

$$-32 - 8 = -40$$

6. Multiply:  $3\frac{1}{3} \cdot 4\frac{3}{5}$

$$\frac{20}{3} \cdot \frac{23}{5} = \frac{46}{3}$$

7. Convert to a decimal:  $\frac{5}{8}$

$$\begin{array}{r} .625 \\ 8 \overline{) 5.000} \\ \underline{48} \phantom{00} \\ 20 \phantom{0} \\ \underline{16} \phantom{0} \\ 40 \\ \underline{40} \\ 0 \end{array} \quad .625$$

8. Convert to a decimal:  $4\frac{4}{5}$

$$\begin{array}{r} 4.8 \\ 5 \overline{) 4.0} \\ \underline{40} \\ 0 \end{array} \quad \underline{4.8}$$

9. Convert to a fraction: 0.56

$$\frac{56}{100} = \frac{28}{50} = \frac{14}{25}$$

10. Find the prime factorization of 252.

$$2 \cdot 2 \cdot 3 \cdot 3 \cdot 7$$

$$\begin{array}{c} 252 \\ \wedge \\ 2 \quad 126 \\ \wedge \\ 2 \quad 63 \\ \wedge \\ 7 \quad 9 \\ \wedge \\ 3 \quad 3 \end{array}$$

11. Divide:  $\frac{\frac{3}{4} - \frac{2}{5}}{\frac{2}{3} + \frac{3}{8}} \cdot \frac{\frac{15}{20} - \frac{2}{20}}{\frac{14}{24} + \frac{9}{24}} = \frac{\frac{7}{20}}{\frac{25}{24}}$

$$\frac{1}{20} \div \frac{25}{24} = \frac{24}{125}$$

12. Divide:  $2.87 \div 0.7$

$$\begin{array}{r} 4.1 \\ 0.7 \overline{) 2.87} \\ \underline{2.8} \phantom{0} \\ 07 \end{array} \quad \underline{4.1}$$

13. Evaluate:  $4x^3 - 2|x|$ ; When  $x = -2$

$$4(-2)^3 - 2|-2| \quad -32 - 4$$

$$4(-8) - 2(2) \quad -36$$

14. Evaluate:  $(a - b)^2$ ; when  $a = -7$  and  $b = -2$

$$(-7 - (-2))^2 = (-7 + 2)^2 = (-5)^2 = 25$$

15. Evaluate  $16x - 2y + 3z$ ; when  $x = -1$ ,  $y = -4$ , and  $z = 3$

$$16(-1) - 2(-4) + 3(3) \quad -16 + 8 + 9 = -1$$

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

$$\begin{array}{r} 7\frac{3}{8} \quad \frac{9}{24} \\ + 4\frac{2}{3} \quad \frac{16}{24} \\ \hline 11\frac{25}{24} = 12\frac{1}{24} \end{array}$$

17. Add:  $23.345 + 6.59$

$$\begin{array}{r} 23.345 \\ 6.590 \\ \hline 29.935 \\ \hline 29.935 \end{array}$$

18. Multiply:  $(-0.3)(23.87)$

$$\begin{array}{r} 23.87 \\ - .3 \\ \hline -7161 \\ -7.161 \end{array}$$

20. Find the LCM of 21, 56, and 252.

$$\begin{array}{l} 252 \quad 2 \cdot 2 \cdot 3 \cdot 3 \cdot 7 \\ 56 \quad 2 \cdot 2 \cdot 2 \cdot 7 \\ 21 \quad 3 \cdot 7 \\ \hline 2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 7 \end{array}$$

19. Multiply:  $(2000)(0.03)(70)$

$$\begin{array}{l} (2000) \left( \frac{3}{100} \right) (70) \\ (60)(70) \\ 4200 \end{array}$$

$$\begin{array}{r} 1 \\ 72 \\ \hline 504 \\ 50 \end{array}$$

$$\text{LCM} = \underline{504}$$

21. A lap around a normal track is 440 yards. If you are participating in a 10K (that is 10 kilometers) fundraiser how many laps around the track you would you have to complete. Note a 10K is 6.21 miles.

? Laps = 6.21 miles	5280 ft	1 yd	1 Laps
	1 mile	3 ft	440 yds

$$\left( (6.21)(5280) \right) \div (3 \cdot 440)$$

$$32788.8 \div 1320$$

$$\begin{array}{r} 1 \\ 440 \\ 3 \\ \hline 1320 \end{array}$$

$$\begin{array}{r} 5280 \\ 6.21 \\ \hline \end{array}$$

$$\begin{array}{r} 5280 \\ 105600 \\ 3168000 \\ \hline 3278980 \end{array}$$

$$\begin{array}{r} 24.84 \\ 1320 \overline{) 32788.80} \\ \underline{2640} \\ 6388 \\ \underline{5280} \\ 1108.8 \\ \underline{10560} \\ 5280 \\ \underline{-5280} \\ 0 \end{array}$$

24.84 Laps