Pre-College Algebra Chapter 1 Review

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: $3\frac{1}{3} \cdot 4\frac{3}{5}$

$\frac{10}{3} \cdot \frac{23}{5} = \frac{46}{3}$

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

.625

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

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.

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

252
2 126
2 63
7 9
3 3

11. Divide: $\frac{\frac{3}{4}-\frac{2}{5}}{\frac{2}{3}+\frac{3}{8}}$

$\frac{\frac{15}{20}-\frac{8}{20}}{\frac{16}{24}+\frac{9}{24}} = \frac{\frac{7}{20}}{\frac{25}{24}}$

$\frac{7}{20} \div \frac{25}{24}$

$\frac{7}{20} \cdot \frac{24}{25} = \frac{42}{125}$

12. Divide: $2.87 \div 0.7$

4.1

07)2.87

28

07

4.1

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

$4(-2)^3 - 2|-2|$

$4(-8) - 2(2)$

$-32 - 4$

-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* $z = 3$

$16(-1) - 2(-4) + 3(3)$

$-16 + 8 + 9 = -1$

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

$7\frac{3}{8} \quad \frac{9}{24}$

$+ 4\frac{2}{3} \quad \frac{16}{24}$

$11\frac{25}{24} = 12\frac{1}{24}$

17. Add: 23.345 + 6.59

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

29.935

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

$23.87 \times -.3 = -7.161$

-7.161

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

$(2000)\left(\frac{3}{100}\right)(70)$

$(60)(70)$

4200

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

252 $2 \cdot 2 \cdot 3 \cdot 3 \cdot 7$

56 $2 \cdot 2 \cdot 2 \cdot 7$

21 $3 \cdot 7$

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

$LCM = 504$

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

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

$32788.8 \div (1320)$

$440 \times 3 = 1320$

$6.21 \times 5280 = 32788.80$

$32788.80 \div 1320 = 24.84$

24.84 Laps