ALGEBRA 1 READINESS TEST SOLUTIONS

1. $\frac{1}{2}$ of $36 = 18$

2. $\frac{2}{3}$ of $12 = 8$

3. $\frac{7}{8}$ of $56 = 49$

4. $\frac{2}{5} = \frac{4}{10} = \frac{6}{15} = \frac{8}{20}$

5. $\frac{3}{7} = \frac{6}{14} = \frac{9}{21} = \frac{12}{28}$

6. $\frac{1}{2} + \frac{3}{4} + \frac{5}{8} =$

$\frac{4}{8} + \frac{6}{8} + \frac{5}{8} = \frac{15}{8} = 1\frac{7}{8}$

7. $\frac{4}{5} - \frac{2}{3} = \frac{12}{15} - \frac{10}{15} = \frac{2}{15}$

8. $\frac{1}{5} \div \frac{1}{6} = \frac{1}{5} \times \frac{6}{1} = \frac{6}{5} = 1\frac{1}{5}$

9. $4\frac{2}{3} \div \frac{7}{18} = \frac{\overset{2}{\cancel{14}}}{\cancel{3}} \times \frac{\overset{6}{\cancel{18}}}{\cancel{7}} = 12$

10. $\frac{3}{5} \times 2\frac{1}{4} \times 4\frac{1}{3} =$

$\frac{3}{5} \times \frac{9}{4} \times \frac{13}{3} = \frac{117}{20} = 5\frac{17}{20}$

11. $4\frac{1}{2} = \ 3\frac{9}{6}$

$-3\frac{2}{3} = -3\frac{4}{6}$

$\overline{\qquad \frac{5}{6}}$

12. $\frac{47}{7}$

13.
$$\begin{array}{r} 8.63 \\ -1.85 \\ \hline 6.78 \end{array}$$

14.
$$\begin{array}{r} 7.0 \\ +6.38 \\ \hline 13.38 \end{array}$$

15.
$$\begin{array}{r} 21.052 \\ -\ .486 \\ \hline 20.567 \end{array}$$

16.
$$\begin{array}{r} 4.29 \\ \times\ .5 \\ \hline 2.145 \end{array}$$

17.
$$\begin{array}{r} 2.7 \\ \times\ 3. \\ \hline 8.1 \end{array}$$

18.
$$\begin{array}{r} .005 \\ \times\ .08 \\ \hline .00040 \end{array}$$ or .0004

19. $5\overline{\smash{)}16.6} = 3.32$

20. .825 rounds to .83

$.04\overline{\smash{)}.033}$

21. .727 rounds to .73

$11\overline{\smash{)}8.}$

22. 6% = .06

23. 45% = .45

24. $\dfrac{6}{10} = .6 = 60\%$

25. $\dfrac{1}{4} = .25 = 25\%$

26. $(-7) + (-24) = -31$

27. $(-6) \times (-14) = 84$

28. $(10) - (-5) = 15$

29. $(-36) \div (9) = -4$

30. $-1^2 = -(1)(1) = -1$

31. $-(5)^3 = -(5)(5)(5) = -125$

32. $(-5)^2 = (-5)(-5) = 25$

33. $\left(-\dfrac{2}{5}\right)^2 = \left(-\dfrac{2}{5}\right)\left(-\dfrac{2}{5}\right) = \dfrac{4}{25}$

34. $2 \times 10^3 + 7 \times 10^2 + 1 \times 10^1 + 6 \times 10^0 + 8 \times \dfrac{1}{10^1} =$

$2 \times 1000 + 7 \times 100 + 1 \times 10 + 6 \times 1 + 8 \times .1 =$

$2000 + 700 + 10 + 6 + .8 = 2{,}716.8$

35. $\sqrt{81} = 9$

36. $\sqrt{25} = 5$

37. $\sqrt{X^2} = X$

38. 14

39. 8

40. 40

41. 18

42. $2 \times 2 \times 2 \times 7 = 56$

43. $5 \times 5 \times 3 = 75$

44. 7

45. $\dfrac{1}{4}$