

Algebra I Summer Review Answer Key

I. Solve Each Equation.

(1) $x - 3 = 22$ **25**

(2) $y - -12 = 22$ **10**

(3) $2x + -15 = 23$ **19**

(4) $\frac{3}{8}g = 3$ **8**

(5) $\frac{1}{6}g + \frac{3}{15} = \frac{3}{5}$ **$\frac{12}{5} = 2\frac{2}{5}$**

$$(6) \quad 5x - 15 = 3x - 1 \quad \underline{6}$$

$$(7) \quad \frac{5t - 5}{-5} = 20 \quad \underline{-19}$$

$$(8) \quad -x - \frac{3}{5} = \frac{2}{6} \quad \underline{-\frac{14}{15}}$$

$$(9) \quad y - \left(-\frac{1}{2}\right) = \frac{2}{3} \quad \underline{\frac{1}{6}}$$

$$(10) \quad \frac{2}{7}x + \left(-\frac{3}{21}\right) = \frac{4}{7} \quad \underline{\frac{5}{2} = 2\frac{1}{2}}$$

$$(11) \quad \frac{3}{8}g = \frac{8}{3} \quad \underline{\frac{64}{9} = 7\frac{1}{9}}$$

$$(12) \quad -\frac{1}{6}g - \frac{3}{15} = \frac{3}{5} \qquad \underline{\underline{-\frac{24}{5} = -4\frac{4}{5}}}$$

$$(13) \quad 4x - 15 = 3x - 1 \qquad \underline{\underline{12}}$$

$$(14) \quad \frac{5t - 5}{2} = -20 \qquad \underline{\underline{-7}}$$

$$(15) \quad \frac{3}{4} = y + \frac{1}{4} \qquad \underline{\underline{\frac{1}{2}}}$$

$$(16) \quad f = \frac{5}{16} - \frac{2}{16} \qquad \underline{\underline{\frac{3}{16}}}$$

$$(17) \quad 2\frac{5}{16} = g + 1\frac{2}{32} \qquad \underline{\underline{\frac{5}{4}}}$$

$$(18) \quad x - \frac{2}{5} = \frac{4}{15} \qquad \underline{\frac{2}{3}}$$

$$(19) \quad -6\frac{2}{3} - 5\frac{1}{2} = p \qquad \underline{-\frac{73}{6}}$$

$$(20) \quad j - \frac{3}{5} = \frac{8}{10} \qquad \underline{\frac{7}{5}}$$

$$(21) \quad y + 7.8 = -4.9 \qquad \underline{-12.7}$$

$$(28) \quad -r - 5 < 4 + 10r \quad r > -\frac{9}{11}$$

$$(29) \quad 7 + 3y > 2(y + 3) - 2(-1 - y) \quad y < -1$$

III. Simplify each expression.

$$(30) \quad 37.7w + 21.8w \quad \underline{59.50w}$$

$$(31) \quad 17y - 3.7y + 13.85y \quad \underline{27.15y}$$

$$(32) \quad 5.93 + m(2.1 - 4.09) \quad \underline{-1.99m + 5.93}$$

IV. Write an equation for the problem. Then solve the equation.

- (33)** One half of a number is 13. What is the number?

$$\frac{1}{2}n = 13$$

$$n = 26$$

- (34)** Three less than fifty-two times a number is ninety-eight. What is the number?

$$52n - 3 = 98$$

$$n = \frac{101}{52} = 1\frac{49}{52}$$

- (35)** Three times a number equals 66. What is the number?

$$3x = 66$$

$$x = 22$$