Alg I 3.4 WS

Name: KEY

**Solve.**

1. $9x - 2 = 8x + 7$

$-8x \quad -8x$

$x - 2 = 7$

$+2 \quad +2$

$\boxed{x = 9}$

2. $5n - 3 = 3n + 1$

$-3n \quad -3n$

$2n - 3 = 1$

$+3 \quad +3$

$\frac{2n}{2} = \frac{4}{2}$

$\boxed{n = 2}$

3. $4z - 5 = 8z + 3$

$-4z \quad -4z$

$-5 = 4z + 3$

$-3 \quad -3$

$\frac{-8}{4} = \frac{4z}{4}$

$\boxed{z = -2}$

4. $-a+4=a+6$

$+a \quad +a$

$4 = 2a + 6$

$-6 \quad -6$

$\frac{-2}{2} = \frac{2a}{2}$

$\boxed{a = -1}$

5. $w + 8 = w - 3$

$-w \quad -w$

$8 = -3$

$\boxed{\text{NS}}$

6. $6p - 3 = 4p - 1$

$-4p \quad -4p$

$2p - 3 = -1$

$+3 \quad +3$

$\frac{2p}{2} = \frac{2}{2}$

$\boxed{p = 1}$

7. $2(y - 3) = y + 4$

$2y - 6 = y + 4$

$-y \quad -y$

$y - 6 = 4$

$+6 \quad +6$

$\boxed{y = 10}$

8. $3(m + 2) = 8 + m$

$3m + 6 = 8 + m$

$-m \quad -m$

$2m + 6 = 8$

$-6 \quad -6$

$\frac{2m}{2} = \frac{2}{2}$

$\boxed{m = 1}$

9. $6 + x = 6(x - 5)$

$6 + x = 6x - 30$

$-x \quad -x$

$6 = 5x - 30$

$+30 \quad +30$

$\frac{36}{5} = \frac{5x}{5}$

$\boxed{x = \frac{36}{5}}$

10. $7(b + 3) = 7b - 4$

$7b + 21 = 7b - 4$

$-7b \quad -7b$

$21 = -4$

$\boxed{\text{NS}}$

11. $5d - 3 + 2d = 4d + 9$

$7d - 3 = 4d + 9$

$-4d \quad -4d$

$3d - 3 = 9$

$+3 \quad +3$

$\frac{3d}{3} = \frac{12}{3}$

$\boxed{d = 4}$

12. $4(2m + 5) = 3m - 5$

$8m + 20 = 3m - 5$

$-3m \quad -3m$

$5m + 20 = -5$

$-20 \quad -20$

$\frac{5m}{5} = \frac{-25}{5}$

$\boxed{m = -5}$

13. $5x + 11 = 4x + 18$

$-4x \quad -4x$

$x + 11 = 18$

$-11 \quad -11$

$\boxed{x = 7}$

14. $11p - 4 = 6p + 1$

$-6p \quad -6p$

$5p - 4 = 1$

$+4 \quad +4$

$\frac{5p}{5} = \frac{5}{5}$

$\boxed{p = 1}$

15. $15x - 8 = 14x + 13$

$-14x \quad -14x$

$x - 8 = 13$

$+8 \quad +8$

$\boxed{x = 21}$

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16. $4z - 15 = 4z + 11$

$-4z \quad -4z$

$-15 = 11$

NS

17. $4(w + 3) = w - 15$

$4w + 12 = w - 15$

$-w \quad -w$

$3w + 12 = -15$

$-12 \quad -12$

$\frac{3w}{3} = \frac{-27}{3}$

$w = -9$

18. $8b + 11 - 3b = 2b + 2$

$5b + 11 = 2b + 2$

$-2b \quad -2b$

$3b + 11 = 2$

$-11 \quad -11$

$\frac{8b}{8} = \frac{9}{3}$

$b = 3$

19. $7 + x = \frac{1}{2}(4x - 2)$

$7 + x = 2x - 1$

$-x \quad -x$

$7 = x - 1$

$+1 \quad +1$

$x = 8$

20. $\frac{1}{4}(8z - 4) = z + 8 - 2z$

$2z - 1 = -z + 8$

$+z \quad +z$

$3z - 1 = 8$

$+1 \quad +1$

$\frac{3z}{3} = \frac{9}{3}$

$z = 3$

21. $\frac{1}{3}(6x + 3) = 2x - 5$

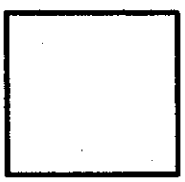
$2x + 1 = 2x - 5$

$-2x \quad -2x$

$1 = -5$

NS

22. Find the perimeter of the square.



$5x - 8$

$3x \quad 12$

$2(3x) = 2(5x - 8)$

$6x = 10x - 16$

$-6x \quad -6x$

$0 = 4x - 16$

$+16 \quad +16$

$\frac{16}{4} = \frac{4x}{4}$

$x = 4$

$P = 48$

23. Find the perimeter of the square.

$10x$

$20$

$6x + 8$

$2(6x + 8) = 2(10x)$

$12x + 16 = 20x$

$-12x \quad -12x$

$\frac{16}{8} = \frac{8x}{8}$

$x = 2$

$P = 40$