

1.2

1) $5 + \frac{n}{4} = 4$

$$\frac{-5}{-5} \quad \frac{-5}{-5}$$

$$(4) \frac{n}{4} = -1(4)$$

$$n = -4$$

15) $24 = 2n - 8$

$$\frac{+8}{+8} \quad \frac{+8}{+8}$$

$$\frac{32}{2} = \frac{2n}{2}$$

$$16 = n$$

27) $-2x + 4 = 22$

$$\frac{-4}{-4} \quad \frac{-4}{-4}$$

$$\frac{-2x}{-2} = \frac{18}{-2}$$

$$x = -9$$

3) $102 = -7r + 4$

$$\frac{-4}{-4} \quad \frac{-4}{-4}$$

$$\frac{98}{-7} = \frac{(-7r)}{-7}$$

$$-14 = r$$

17) $2 = -12 + 2r$

$$\frac{+12}{+12} \quad \frac{+12}{+12}$$

$$\frac{14}{2} = \frac{2r}{2}$$

$$7 = r$$

29) $-20 = 4p + 4$

$$\frac{-4}{-4} \quad \frac{-4}{-4}$$

$$\frac{-24}{4} = \frac{4p}{4}$$

$$-6 = p$$

5) $-8n + 3 = -77$

$$\frac{-3}{-3} \quad \frac{-3}{-3}$$

$$\frac{-8n}{-8} = \frac{-80}{-8}$$

$$n = 10$$

19) $\frac{b}{3} + 7 = 10$

$$\frac{-7}{-7} \quad \frac{-7}{-7}$$

$$(3) \frac{b}{3} = 3(3)$$

$$b = 9$$

31) $-5 = 3 + \frac{n}{2}$

$$\frac{-3}{-3} \quad \frac{-3}{-3}$$

$$(2)(-8) = \frac{n}{2}(2)$$

$$-16 = n$$

7) $\frac{0}{-6} = \frac{-6v}{-6}$

$$0 = v$$

21) $152 = 8n + 64$

$$\frac{-64}{-64} \quad \frac{-64}{-64}$$

$$\frac{88}{8} = \frac{8n}{8}$$

$$11 = n$$

33) $\frac{r}{8} - 6 = -5$

$$\frac{+6}{+6} \quad \frac{+6}{+6}$$

$$(8) \frac{r}{8} = 1(8)$$

$$r = 8$$

9) $-8 = \frac{x}{5} - 6$

$$\frac{+6}{+6} \quad \frac{+6}{+6}$$

$$(5)(-2) = \frac{x}{5}(5)$$

$$-10 = x$$

23) $-16 = 8a + 64$

$$\frac{-64}{-64} \quad \frac{-64}{-64}$$

$$\frac{-80}{8} = \frac{8a}{8}$$

$$-10 = a$$

35) $-40 = 4n - 32$

$$\frac{+32}{+32} \quad \frac{+32}{+32}$$

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

$$-2 = n$$

11) $0 = -7 + \frac{k}{2}$

$$\frac{+7}{+7} \quad \frac{+7}{+7}$$

$$(2)7 = \frac{k}{2}(2)$$

$$14 = k$$

25) $56 + 8k = 64$

$$\frac{-56}{-56} \quad \frac{-56}{-56}$$

$$\frac{8k}{8} = \frac{8}{8}$$

$$k = 1$$

37) $87 = 3 - 7v$

$$\frac{-3}{-3} \quad \frac{-3}{-3}$$

$$\frac{84}{-7} = \frac{-7v}{-7}$$

$$-12 = v$$

13) $-12 + 3x = 0$

$$\frac{+12}{+12} \quad \frac{+12}{+12}$$

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

$$x = 4$$

39) $-x + 1 = -11$

$$\frac{-1}{-1} \quad \frac{-1}{-1}$$

$$\frac{-x}{-1} = \frac{-12}{-1}$$

$$x = 12$$

Answers to Absolute Value Equations

1) 8, -8

2) 7, -7

3) 1, -1

4) 2, -2

5) 6, $-\frac{29}{4}$

6) $\frac{38}{9}$, -6

7) -2, $-\frac{10}{3}$

8) -3, 9

9) 3, $-\frac{39}{7}$

10) $\frac{16}{5}$, -6

11) 7, $-\frac{29}{3}$

12) $-\frac{1}{3}$, -1

13) -9, 15

14) 3, $-\frac{5}{3}$

15) -2, 0

16) 0, -2

17) $-\frac{6}{7}$, 0

18) -4, $\frac{4}{3}$

19) $-\frac{17}{2}$, $\frac{7}{2}$

20) $-\frac{6}{5}$, -2

21) -6, -8

22) 6, $-\frac{25}{3}$

23) 1, $-\frac{13}{7}$

24) 7, -21

25) -2, 10

26) $-\frac{7}{5}$, 1

27) 6, $-\frac{16}{3}$

28) $\frac{2}{5}$, 0

29) $-\frac{13}{7}$, 1

30) -3, 5

31) $-\frac{4}{8}$, $\frac{2}{7}$

32) $-\frac{6}{8}$, $\frac{2}{5}$

33) $-\frac{4}{5}$

34) $-\frac{27}{5}$, $-\frac{2}{13}$

35) $-\frac{9}{22}$, $\frac{4}{38}$

36) $-\frac{12}{8}$

$$31. \sqrt{2x+3} = 3$$

$$2x+3 = 9$$

$$2x = 6$$

$$x = 3$$

$$32. \sqrt{5x+1} = 4$$

$$5x+1 = 16$$

$$5x = 15$$

$$x = 3$$

$$33. 2(x-3)^2 = 8$$

$$(x-3)^2 = 4$$

$$x-3 = \pm 2$$

$$x = 3 \pm 2$$

$$x = 1$$

$$x = 5$$



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