

1. Solve for  $x$ .

(a)  $2a^2 - 7a - 9 = 0$

(b)  $x^2 - 15x - 54 = 0$

(c)  $p^2 + 2p - 35 = 0$

(d)  $x^2 + 20x + 51 = 0$

(e)  $a^2 + 7a - 44 = 0$

(f)  $2m^2 + 13m + 6 = 0$

(g)  $p^2 - 26p + 133 = 0$

(h)  $m^2 - m - 90 = 0$

(i)  $2x^2 - 5x + 3 = 0$

(j)  $x^2 + 15x - 54 = 0$

(k)  $p^2 + 24p + 143 = 0$

(l)  $a^2 - 12a + 32 = 0$

2. Solve for  $x$ .

(a)  $a^2 + 8 = 6a$

(b)  $x^2 + 10x + 21 = 0$

(c)  $30 = m^2 - 7m$

(d)  $x^2 + 20 = 9x$

(e)  $a^2 = 6a + 27$

(f)  $m + 56 = m^2$

(g)  $15 = 4p^2 + 4p$

(h)  $x + 56 = x^2$

(i)  $13m - 3 = 12m^2$

(j)  $4x^2 + 7x = 2$

(k)  $2 = x^2 - x$

(l)  $3 = p^2 + 2p$

3. Solve for  $x$ .

(a)  $84 = a(a - 5)$

(b)  $3 = 2p(4p + 5)$

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

(d)  $a^2 + 2(a - 4) = 0$

(e)  $x^2 - 16 = 0$

(f)  $x^2 = 36$

(g)  $9m^2 = 64$

(h)  $4a^2 = 49$

(i)  $25p^2 = 81$

(j)  $2x^2 = 32$

(k)  $3m^2 = 27$

(l)  $3p^2 - 5 = 22$

1.

(a)  $4\frac{1}{2}$ ,  $-1$

(b)  $-3$ ,  $18$

(c)  $-7$ ,  $5$

(d)  $-3$ ,  $-17$

(e)  $-11$ ,  $4$

(f)  $-\frac{1}{2}$ ,  $-6$

(g)  $19$ ,  $7$

(h)  $-9$ ,  $10$

(i)  $1\frac{1}{2}$ ,  $1$

(j)  $-18$ ,  $3$

(k)  $-11$ ,  $-13$

(l)  $8$ ,  $4$

2.

(a)  $2$ ,  $4$

(b)  $-3$ ,  $-7$

(c)  $-3$ ,  $10$

(d)  $4$ ,  $5$

(e)  $-3$ ,  $9$

(f)  $-7$ ,  $8$

(g)  $1\frac{1}{2}$ ,  $-2\frac{1}{2}$

(h)  $-7$ ,  $8$

(i)  $\frac{3}{4}$ ,  $\frac{1}{3}$

(j)  $\frac{1}{4}$ ,  $-2$

(k)  $-1$ ,  $2$

(l)  $1$ ,  $-3$

3.

(a)  $-7$ ,  $12$

(b)  $\frac{1}{4}$ ,  $-1\frac{1}{2}$

(c)  $\frac{1}{3}$ ,  $3$

(d)  $2$ ,  $-4$

(e)  $4$ ,  $-4$

(f)  $6$ ,  $-6$

(g)  $-2\frac{2}{3}$ ,  $2\frac{2}{3}$

(h)  $-3\frac{1}{2}$ ,  $3\frac{1}{2}$

(i)  $-1\frac{4}{5}$ ,  $1\frac{4}{5}$

(j)  $-4$ ,  $4$

(k)  $-3$ ,  $3$

(l)  $-3$ ,  $3$