Solve each equation by factoring.

13) $11k^2 = 110 + 99k$

14) $10p^2 - 160p = -480$

15) $n^2 - 8n = 0$

16) $8x^2 = 48x$

17) $6m^2 = 42m + 180$

18) $10r^2 - 90r = -200$

19) $5n^2 - 17n = 12$

20) $3x^2 = -2x + 16$

Solve each equation. Remember to check for extraneous solutions.

31) $\frac{b+2}{2b^2} = \frac{3b-18}{b^2} - \frac{1}{2b^2}$

32) $\frac{1}{r} + \frac{1}{r^2} = \frac{4}{r}$

33) $\frac{6n-12}{n^2} = \frac{4n-6}{n^2} + \frac{1}{2n}$

34) $\frac{1}{2x^2} + \frac{x-1}{2x^2} = \frac{6}{x^2}$

35) Solve for x: $\frac{12.3 - x}{4.5} = -0.83$

36) Solve for r: $\sqrt{45 - x} = 5$

37) Solve for n: $1.96\sqrt{\frac{0.5 \cdot 0.5}{n}} < 0.03$

38) If $y = 10.2x^{0.72}$, find y when $x = 32.7$.

Solve each equation by factoring.

13) $11k^2 = 110 + 99k$

$\{10, -1\}$

14) $10p^2 - 160p = -480$

$\{12, 4\}$

15) $n^2 - 8n = 0$

$\{8, 0\}$

16) $8x^2 = 48x$

$\{6, 0\}$

17) $6m^2 = 42m + 180$

$\{10, -3\}$

18) $10r^2 - 90r = -200$

$\{4, 5\}$

19) $5n^2 - 17n = 12$

$\left\{-\frac{3}{5}, 4\right\}$

20) $3x^2 = -2x + 16$

$\left\{-\frac{8}{3}, 2\right\}$

Solve each equation. Remember to check for extraneous solutions.

31) $\frac{b+2}{2b^2} = \frac{3b-18}{b^2} - \frac{1}{2b^2}$ $\left\{\frac{39}{5}\right\}$

32) $\frac{1}{r} + \frac{1}{r^2} = \frac{4}{r}$ $\left\{\frac{1}{3}\right\}$

33) $\frac{6n-12}{n^2} = \frac{4n-6}{n^2} + \frac{1}{2n}$

$\{4\}$

34) $\frac{1}{2x^2} + \frac{x-1}{2x^2} = \frac{6}{x^2}$

$\{12\}$

35) Solve for x: $\frac{12.3 - x}{4.5} = -0.83$

$x=16.035$

36) Solve for r: $\sqrt{45 - x} = 5$

$x=20$

37) Solve for n: $1.96\sqrt{\frac{0.5 \cdot 0.5}{n}} < 0.03$

$n > 1067.11$

38) If $y = 10.2x^{0.72}$, find y when $x = 32.7$.

$y = 125.62$

Solve each equation by factoring.

13) $k^2 = -63 - 16k$

14) $n^2 = -48 - 15n$

15) $8x^2 = 48x$

16) $p^2 = 24 \quad 11p$

17) $n^2 + 121 = -22n$

18) $m^2 = -17m - 70$

19) $7x^2 + 56 = -57x$

20) $7r^2 - 57r = -8$

Solve each equation. Remember to check for extraneous solutions.

31) $1 + \frac{1}{r} = \frac{4}{r}$

32) $\frac{1}{4m} + \frac{1}{4m^2} = \frac{1}{m^2}$

33) $\frac{3}{4x^2} = \frac{1}{4x} + \frac{1}{4x^2}$

34) $\frac{1}{6n^2} - \frac{1}{6n} = \frac{1}{n^2}$

35) Solve for x: $\frac{12.3 - x}{4.5} = -0.83$

36) Solve for r: $\sqrt{45 - x} = 5$

37) Solve for n: $1.96\sqrt{\frac{0.5 \cdot 0.5}{n}} < 0.03$

38) If $y = 10.2x^{0.72}$, find y when $x = 32.7$.

Solve each equation by factoring.

13) $k^2 = -63 - 16k$

$\{-9, -7\}$

14) $n^2 = -48 - 15n$

$\{-4, -12\}$

15) $8x^2 = 48x$

$\{-6, 0\}$

16) $p^2 = 24 \quad 11p$

$\{-8, -3\}$

17) $n^2 + 121 = -22n$

$\{-11\}$

18) $m^2 = -17m - 70$

$\{-10, -7\}$

19) $7x^2 + 56 = -57x$

$\left\{-\frac{8}{7}, -7\right\}$

20) $7r^2 - 57r = -8$

$\left\{\frac{1}{7}, 8\right\}$

Solve each equation. Remember to check for extraneous solutions.

31) $1 + \frac{1}{r} = \frac{4}{r}$

$\{3\}$

32) $\frac{1}{4m} + \frac{1}{4m^2} = \frac{1}{m^2}$

$\{3\}$

33) $\frac{3}{4x^2} = \frac{1}{4x} + \frac{1}{4x^2}$

$\{2\}$

34) $\frac{1}{6n^2} - \frac{1}{6n} = \frac{1}{n^2}$

$\{-5\}$

35) Solve for x: $\frac{12.3 - x}{4.5} = -0.83$

x=16.035

36) Solve for r: $\sqrt{45 - x} = 5$

x=20

37) Solve for n: $1.96\sqrt{\frac{0.5 \cdot 0.5}{n}} < 0.03$

$n > 1067.11$

38) If $y = 10.2x^{0.72}$, find y when $x = 32.7$.

$y = 125.62$

Solve each equation by factoring.

13) $x^2 - 2x = 120$

14) $7a^2 = 7a + 630$

15) $p^2 - 96 = -4p$

16) $7k^2 = 308 + 49k$

17) $x^2 + 10x = 0$

18) $n^2 = 9n$

19) $10r^2 + 56r = -30$

20) $12m^2 - 32m = 0$

Solve each equation. Remember to check for extraneous solutions.

31) $\frac{1}{5k} + \frac{k+5}{5k} = \frac{1}{k}$

32) $\frac{1}{n^2} = \frac{1}{2n^2} + \frac{n+4}{2n^2}$

33) $\frac{1}{p} = \frac{1}{5p} + \frac{p-4}{p}$

34) $1 - \frac{1}{x} = \frac{6x-36}{x}$

35) Solve for x: $\frac{12.3 - x}{4.5} = -C.83$

36) Solve for r: $\sqrt{45 - x} = 5$

37) Solve for n: $1.96\sqrt{\frac{0.5 \cdot 0.5}{n}} < 0.03$

38) If $y = 10.2x^{0.72}$, find y when $x = 32.7$.

Solve each equation by factoring.

13) $x^2 - 2x = 120$

$\{-10, 12\}$

14) $7a^2 = 7a + 630$

$\{10, -9\}$

15) $p^2 - 96 = -4p$

$\{-12, 8\}$

16) $7k^2 = 308 + 49k$

$\{11, -4\}$

17) $x^2 + 10x = 0$

$\{-10, 0\}$

18) $n^2 = 9n$

$\{9, 0\}$

19) $10r^2 + 56r = -30$

$\left\{-\frac{3}{5}, -5\right\}$

20) $12m^2 - 32m = 0$

$\left\{\frac{8}{3}, 0\right\}$

Solve each equation. Remember to check for extraneous solutions.

31) $\frac{1}{5k} + \frac{k+5}{5k} = \frac{1}{k}$

$\{-1\}$

32) $\frac{1}{n^2} = \frac{1}{2n^2} + \frac{n+4}{2n^2}$

$\{-3\}$

33) $\frac{1}{p} = \frac{1}{5p} + \frac{p-4}{p}$ $\left\{\frac{24}{5}\right\}$

34) $1 - \frac{1}{x} = \frac{6x-36}{x}$

$\{7\}$

35) Solve for x: $\frac{12.3 - x}{4.5} = -0.83$

x=16.035

36) Solve for r: $\sqrt{45 - x} = 5$

x=20

37) Solve for n: $1.96\sqrt{\frac{0.5 \cdot 0.5}{n}} < 0.03$

$n > 1067.11$

38) If $y = 10.2x^{0.72}$, find y when $x = 32.7$.

$y = 125.62$