

12.8.15

Solve using square roots.
(Isolate and solve for r.)

$$9r^2 - 5 = 607$$

$$+5 \quad +5$$

$$\frac{9r^2}{9} = \frac{612}{9}$$

$$\sqrt{r^2} = \sqrt{68}$$

$$r = \pm 2\sqrt{17}$$

$$\begin{array}{c} 36 \\ -6 \quad -6 \\ \hline -12 \end{array}$$

Solve by completing the square.
(Use your notes from yesterday.)

$$\begin{aligned} a &= 1 \\ b &= -12 \\ c &= 11 \end{aligned}$$

$$x^2 - 12x + 11 = 0$$

$$-11 \quad -11$$

$$x^2 - 12x = -11 \quad \textcircled{1}$$

$$\frac{b}{2} = \frac{-12}{2} = -6 \quad \textcircled{2}$$

$$(-6)^2 = 36 \quad \textcircled{3}$$

$$\sqrt{4} \cdot \sqrt{17}$$

$$x^2 - 12x + 36 = 25$$

$$\sqrt{(x-6)^2} = \sqrt{25} \quad \textcircled{4}$$

$$x-6 = \pm 5$$

$$x-6 = 5$$

$$+6 \quad +6$$

$$x = 11$$

$$x-6 = -5$$

$$+6 \quad +6$$

$$x = 1$$