

**Instructions:** Show all work. Use exact answers, unless specifically asked to round.

1. What is the probability of rolling a standard dice and getting a 6 twice in a row?

$$\frac{1}{6} \cdot \frac{1}{6} = \frac{1}{36}$$

2. What is the probability of drawing a queen, followed by a four (without replacement) from a standard deck?

$$\frac{4}{52} \cdot \frac{4}{51} = \frac{4}{663} \approx .0060$$

3. Simplify  $4(x - 3) - 2(x - 5)$

$$\begin{aligned} 4x - 12 - 2x + 10 \\ 2x - 2 \end{aligned}$$

4. Solve  $\frac{1}{2}x - 3 = 11$ .

$$\begin{aligned} &+3 \quad +3 \\ \hline \frac{1}{2}x &= 14 \\ x &= 28 \end{aligned}$$