1-85. See below.

a. Yes. It has four sides. $m_{AB} = m_{CD} = \frac{1}{2}$ and $m_{BC} = m_{AD} = -2$, so each pair of consecutive sides is perpendicular and forms 90° angles.

b. $A'\,(4, 3)\ B'\,(6, -1),\ C'\,(-2, -5),\ D'\,(-4, -1)$

1-86. See below.

a. $x = -4.75$

b. $x = -94$

c. $x \approx 1.14$

d. $a = 22$

1-87. See below.

a. There are 10 combinations: a & b, a & c, a & d, a & e, b & c, b & d, b & e, c & d, c & e, d & e

b. Yes. If the outcomes are equally likely, we can use the theoretical probability computation in the Math Notes box in Lesson 1.2.1.

c. $\frac{3}{10}$

d. $\frac{9}{10}$

e. The outcomes that satisfy part (d) include the outcomes that satisfy part (c), but there are others on the part (d) list as well.

1-88. See below.

a. $y = \frac{4}{3}x - 2$

b. The resulting line coincides with the original line; $y = \frac{4}{3}x - 2$

c. The image is parallel; $y = \frac{4}{3}x - 7$

d. They are parallel, because they all have a slope of $\frac{4}{3}$.

e. $y = -\frac{3}{4}x + 16$

1-89. See below.

a. -14