NAME Key DATE PERIOD

12-4 Skills Practice

Multiplying Probabilities

A die is rolled twice. Find each probability.

1. P(5, then 6) $\frac{1}{6} \cdot \frac{1}{6} = \boxed{\frac{1}{36}}$

2. P(no 2s) $\frac{5}{6} \cdot \frac{5}{6} = \boxed{\frac{25}{36}}$

3. P(two 1s) $\frac{1}{6} \cdot \frac{1}{6} = \boxed{\frac{1}{36}}$

4. P(any number, then not 5) $\frac{6}{6} \cdot \frac{5}{6} = \boxed{\frac{5}{6}}$

5. P(4, then not 6) $\frac{1}{6} \cdot \frac{5}{6} = \boxed{\frac{5}{36}}$

6. P(not 1, then not 2) $\frac{5}{6} \cdot \frac{5}{6} = \boxed{\frac{25}{36}}$

A board game uses a set of 6 different cards. Each card displays one of the following figures: a star, a square, a circle, a diamond, a rectangle, or a pentagon. The cards are placed face down, and a player chooses two cards. Find each probability.

7. P(circle, then star), if no replacement occurs $\frac{1}{6} \cdot \frac{1}{5} = \boxed{\frac{1}{30}}$

8. P(diamond, then square), if replacement occurs $\frac{1}{6} \cdot \frac{1}{6} = \boxed{\frac{1}{36}}$

9. P(2 polygons), if replacement occurs $\frac{5}{6} \cdot \frac{5}{6} = \boxed{\frac{25}{36}}$

10. P(2 polygons), if no replacement occurs $\frac{5}{6} \cdot \frac{4}{5} = \boxed{\frac{2}{3}}$

11. P(circle, then hexagon), if no replacement occurs $\frac{1}{6} \cdot \frac{0}{6} = \boxed{0}$