

## Worksheet 36 - Lesson 91 &amp; 92

Date \_\_\_\_\_ Period \_\_\_\_\_

**Determine if the sequence is geometric. If it is, find the common ratio, the 8th term, and the explicit formula.**

1) 4, 20, 100, 500, ...

2) 1, 2, 4, 8, ...

3) 4, -20, 100, -500, ...

4) -2, 8, -32, 128, ...

**Given two terms in a geometric sequence find the common ratio, the 8th term, and the explicit formula.**

5)  $a_3 = -9$  and  $a_6 = 243$

6)  $a_6 = 1024$  and  $a_5 = -256$

**Given a term in a geometric sequence and the common ratio find the 8th term and the explicit formula.**

7)  $a_4 = -500$ ,  $r = -5$

8)  $a_4 = -432$ ,  $r = 6$

**Find the missing term or terms in each geometric sequence.**

9) ..., -2, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, -486, ...

10) ..., 1, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 7776, ...

**Events  $A$  and  $B$  are independent. Find the missing probability.**

11)  $P(B) = \frac{11}{20}$   $P(A \cap B) = \frac{33}{200}$   $P(A) = ?$

12)  $P(A^c) = \frac{7}{20}$   $P(B^c) = \frac{3}{5}$   $P(A \cap B) = ?$

13)  $P(A) = \frac{11}{20}$   $P(A \cup B) = \frac{71}{80}$   $P(B) = ?$

14)  $P(A) = \frac{2}{5}$   $P(A \cap B) = \frac{1}{5}$   $P(B^c) = ?$

**Find the probability.**

15) A cooler contains twelve bottles of sports drink: three lemon-lime flavored, four orange flavored, and five fruit-punch flavored. You randomly grab a bottle. It is a lemon-lime or an orange.

16) A litter of kittens consists of two gray kittens, two black kittens, and two mixed-color kittens. You randomly pick one kitten. The kitten is gray or mixed-color.