Day 1 Homework

For #1-11, Decide if the following sequences are arithmetic, geometric, or neither.
If they are arithmetic, state the value of *d* (common difference).
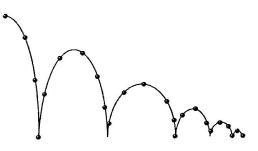If they are geometric, state *r* (common ratio).

1. 6, 12, 18, 24, ... __

2. 6, 11, 17, ... _____

3. 2, 14, 98, 686, ... *geometric, ratio = 7* __

4. 160, 80, 40, 20, ... _____

5. -40, -25, -10, 5, ... _____

6. 7, -21, 63, -189, ... _____

7. 2/3, 4/3, 8/3 ... _____

8. 1/3, 4/3, 7/3, 10/3,... *arithmetic, diff = 1*

9. 10, 10/8, 10/64, ..._____

10. 10, 80, 640, 5120, ..._____

11. 1/3, 8/3, 64/3, 512/3, ..._____

12. Which of the geometric sequences are growing?_____

13. Which of the geometric sequences are declining?_____

14. Which of the geometric sequences are neither growing nor declining? _____

$$\#8 \qquad \overset{+3}{\underset{\downarrow}{}} \quad \frac{1}{3} \quad \frac{4}{3} \quad \overset{+3}{\underset{\downarrow}{}} \quad \frac{7}{3} \quad \overset{+3}{\underset{\downarrow}{}} \quad \frac{10}{3}$$

same   same

$$\frac{1}{3} + \frac{3}{3} = \frac{4}{3}$$

↑

same as +1