Writing Exponential Equations from y-Intercept and Common Ratio

Directions: Write an explicit equation for each exponential function. Show all work. Use $y = f(x) = (b)(r^x)$.

1. y-intercept = 3; common ratio = 7. Write an explicit equation.

2. y-intercept = $-2$; common ratio = $\frac{1}{3}$. Write an explicit equation.

3. y-intercept = 5; common ratio = 2. Write an explicit equation.

4. y-intercept = 12; common ratio = $\frac{1}{4}$. Write an explicit equation.

5. y-intercept = $\frac{1}{2}$; common ratio = 4. Write an explicit equation.

6. y-intercept = $-6$; common ratio = 5. Write an explicit equation.

7. y-intercept = $20$; common ratio = $\frac{3}{4}$. Write an explicit equation.

8. y-intercept = $-8$; common ratio = $\frac{2}{3}$. Write an explicit equation.

9. y-intercept = $\frac{1}{4}$; common ratio = $6$. Write an explicit equation.

10. y-intercept = $15$; common ratio = $\frac{1}{5}$. Write an explicit equation.

11. y-intercept = $\frac{-2}{3}$; common ratio = $3$. Write an explicit equation.

12. y-intercept = $9$; common ratio = $\frac{5}{2}$. Write an explicit equation.