Algebra 1: 5.1/5.2 Quiz Review **Name** _____

Use the simple and compound interest formula to complete the table. Round to the nearest cent.

Simple: $A = P + (Pr)t$ Compound: $A = P \bullet (1+r)^t$

1. Ye has \$700 to deposit into an account. The interest rate available for the account is 6%.

   a. If it costs \$200.00 to have your savings in a compound interest account, would it make sense to use that account if you were only going to save your money for 10 years?

   b. What about for 20 years?

Quantity	Time	Simple Interest Balance	Compound Interest Balance
Units			
Expression			
	0		
	3		
	10		
	20		

2. Rapperville has a population of 18,000. Its population is increasing at a rate of 3.2%. Write a function to represent the population as a function of time. Determine the population after each given number of years. Round your answer to the nearest whole number.

   Function: $P(t) = P(1+r)^t$

   a. 2 years b. 10 years c. 20 years

3. Doglandia has a population of 85,000. Its population is decreasing at a rate of 2.8%. Write a function to represent the population as a function of time. Determine the population after each given number of years. Round your answer to the nearest whole number.

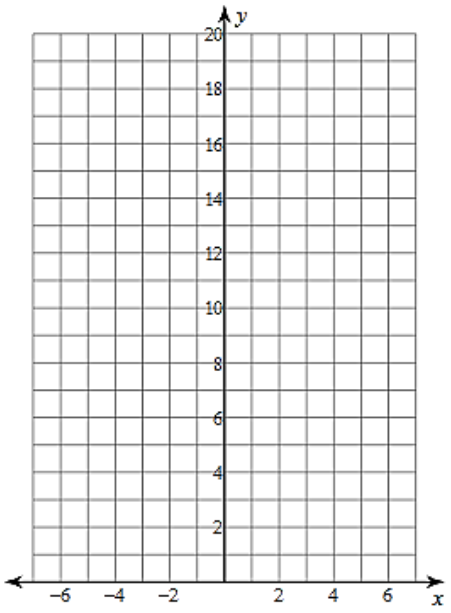
   Function: $P(t) = P(1-r)^t$

   a. 8 years b. 5 years c. 16 years

Complete the table and graph each function. List the y-intercept, asymptote, domain, and range.

4. $y = 3^x$

x	y
-2	
-1	
0	
1	
2	

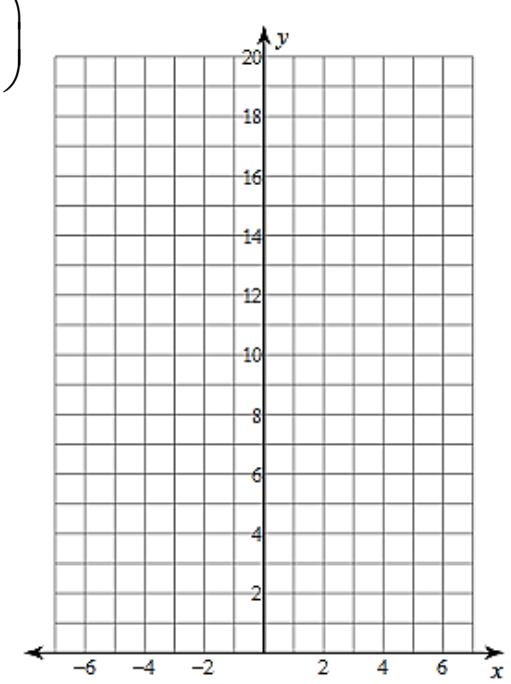


y-intercept: asymptote:

domain: range:

5. $y = \left(\frac{1}{3}\right)^x$

x	y
-2	
-1	
0	
1	
2	

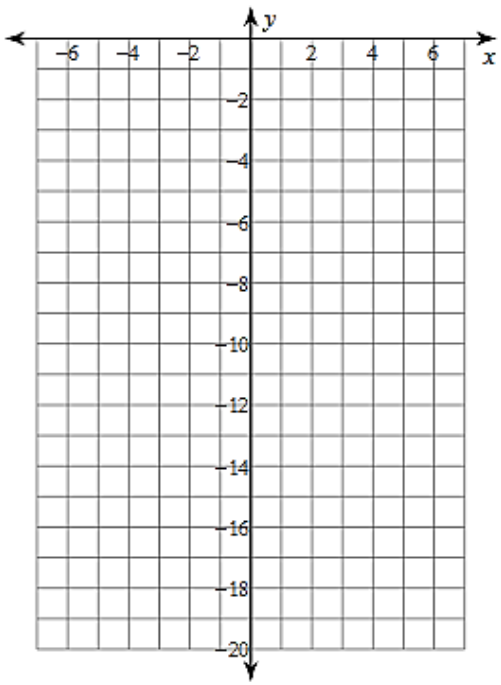


y-intercept: asymptote:

domain: range:

6. $y = -3 \cdot 2^x$

x	y
-2	
-1	
0	
1	
2	

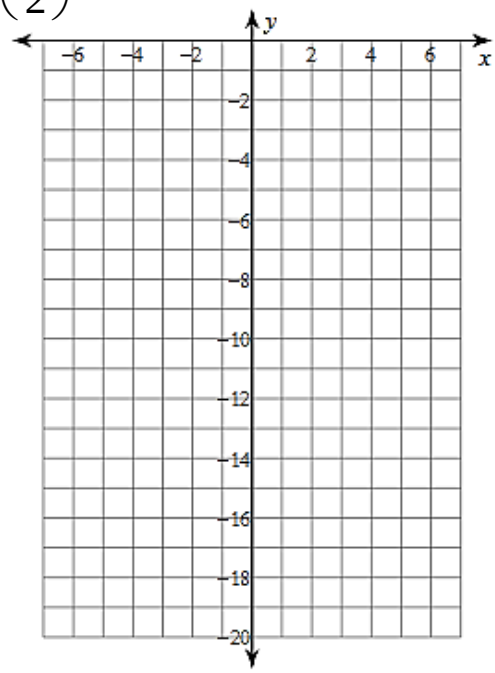


y-intercept: asymptote:

domain: range:

7. $y = -3 \cdot \left(\frac{1}{2}\right)^x$

x	y
-2	
-1	
0	
1	
2	



y-intercept: asymptote:

domain: range: