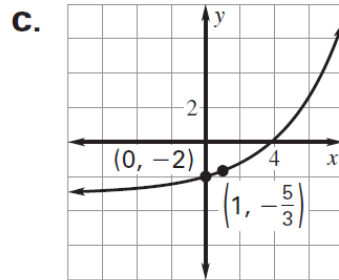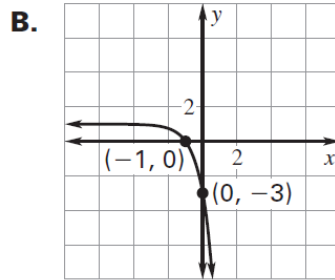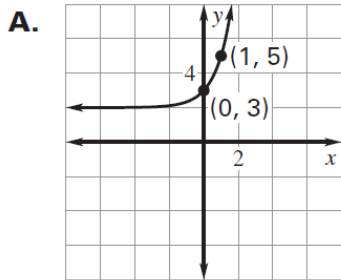# Lesson 7.1 Worksheet

Name: _____

Match the function with its graph.

1. $f(x) = \left(\frac{4}{3}\right)^x - 3$

2. $f(x) = 3^x + 2$

3. $f(x) = -4^{x+1} + 1$

A.

(1, 5)
4
(0, 3)
2

B.

2
(−1, 0)   2
(0, −3)

C.

2
(0, −2)   4
$\left(1, -\frac{5}{3}\right)$

Graph the function. Then state the domain and range.

4.) $f(x) = 4^{x-2}$
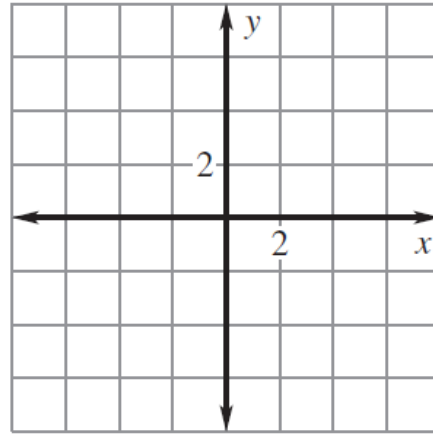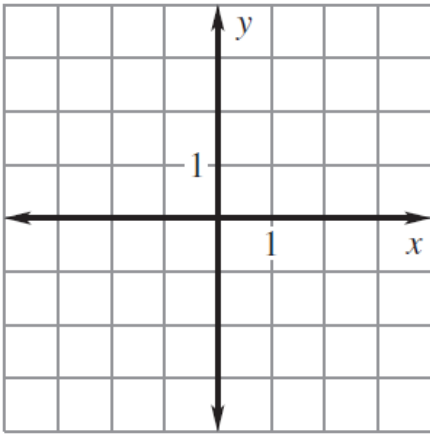
y

1

1   x

domain: _____

range: _____

5.) $f(x) = 2^x + 1$

y

2

2   x

domain: _____

range: _____

6.) $f(x) = -3^{x+1}$

y

2

2   x

domain: _____

range: _____

7.) $f(x) = 2^{x-2} - 3$

y

2

2   x
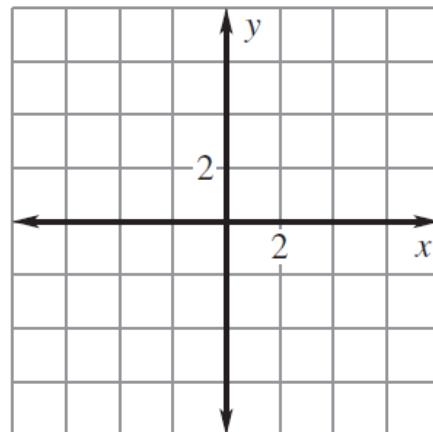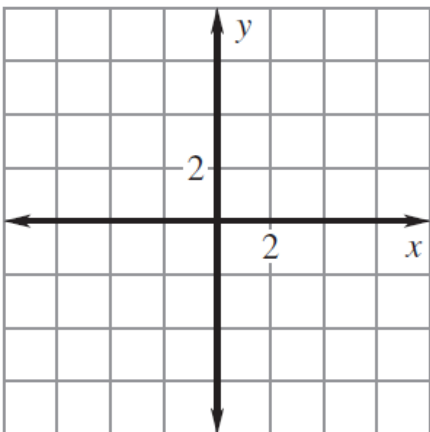
domain: _____

range: _____

8.) $f(x) = -2(3^{x+1}) + 2$
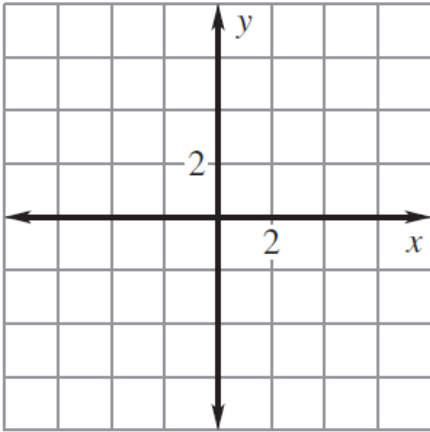
9.) $f(x) = \left(\frac{3}{2}\right)^x - 2$
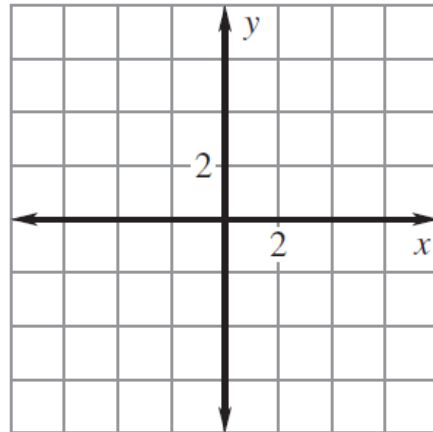
domain: _____

range: _____

domain: _____

range: _____

In Exercises 10-12, use the following information.

You deposit $3500 in an account that earns 2.5% annual interest. Find the balance after one year if the interest is compounded with the given frequency.

10.) annually

11.) quarterly

12.) monthly

In Exercises 13-15, use the following information.

From 1990 to 2000, the population of California can be modeled by

$P = 29,816,591(1.0128)^t$ where t is the number of years since 1990.

13.) What was the population in 1990?

14.) What is the growth factor and annual percent increase?

15.) Estimate the population in 2007.