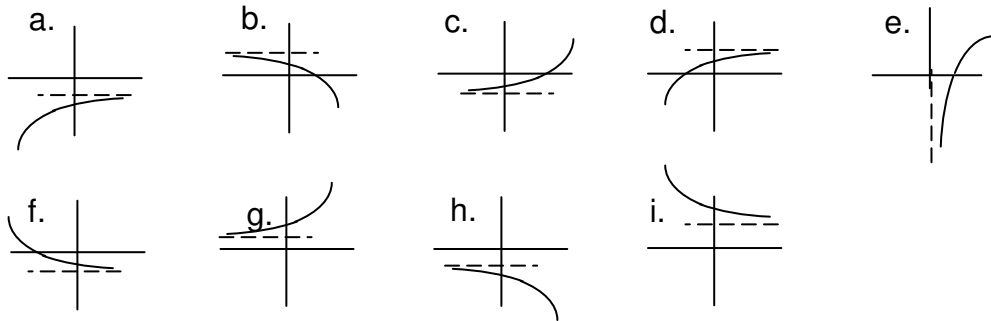


# Exponential and Logarithmic Graphs

1. Match



**Group 1**

$y = 10,000(1.04)^x + 5000$  \_\_\_\_\_  
 $y = -10,000(1.04)^x + 5000$  \_\_\_\_\_  
 $y = 10,000(1.04)^{-x} + 5000$  \_\_\_\_\_  
 $y = -10,000(0.97)^x + 5000$  \_\_\_\_\_

**Group 3**

$y = -10,000(1.04)^{-x} - 5000$  \_\_\_\_\_  
 $y = 10,000(0.97)^x + 5000$  \_\_\_\_\_  
 $y = 5000 - 10,000(1.04)^x$  \_\_\_\_\_  
 $y = 10,000(1.04)^{-x} + 5000$  \_\_\_\_\_

**Group 2**

$y = 10,000(1.04)^x - 5000$  \_\_\_\_\_  
 $y = -10,000(1.04)^x - 5000$  \_\_\_\_\_  
 $y = 10,000(1.04)^{-x} - 5000$  \_\_\_\_\_  
 $y = 10,000 \cdot \log(x)$  \_\_\_\_\_

**Group 4**

$y = 5000 - 10,000(1.04)^{-x}$  \_\_\_\_\_  
 $y = 10,000(1.04)^x - 5000$  \_\_\_\_\_  
 $y = -5000 - 10,000(0.97)^x$  \_\_\_\_\_  
 $y = 10,000(0.97)^x - 5000$  \_\_\_\_\_

2. Sketch each of the following. Indicate the sign of the y-intercept and the end-behavior .

$y = 10,000(1.04)^x + 50,000$   
 $y = -10,000(1.04)^x + 50,000$   
 $y = 10,000(1.04)^{-x} + 5000$   
 $y = -10,000(0.97)^x + 5000$

$y = 10,000(1.04)^x - 5000$   
 $y = -10,000(1.04)^x - 50,000$   
 $y = 10,000(1.04)^{-x} - 5000$   
 $y = 10,000(0.97)^x - 5000$

$y = -10,000(1.04)^{-x} - 50000$   
 $y = 10,000(0.97)^x + 5000$   
 $y = 5000 - 10,000(1.04)^x$

$y = 50,000 - 10,000(1.04)^{-x}$   
 $y = 10,000(1.04)^x - 50,000$   
 $y = -5000 - 10,000(0.97)^x$

Answers:

1.

Groups

1.

g

b

i

d

2.

c

a

f

e

3.

a

i

b

i

4.

d

c

a

f

# Exponential and Logarithmic Graphs

2.

