Name _____ Date _____ Class _____

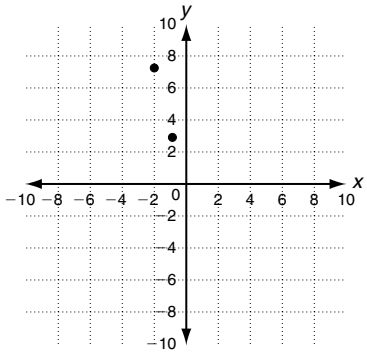
LESSON 7-6

Practice A

The Natural Base, *e*

Graph each exponential function. The first one is started for you.

1. $f(x) = e^{-x}$

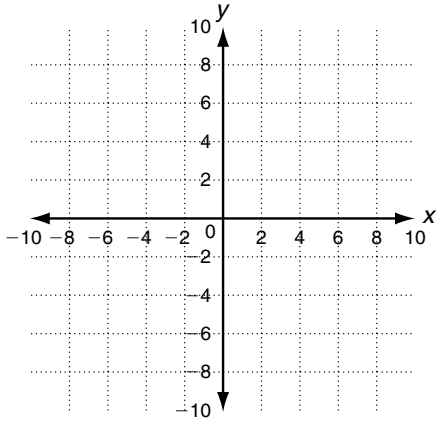


a. Complete the table.

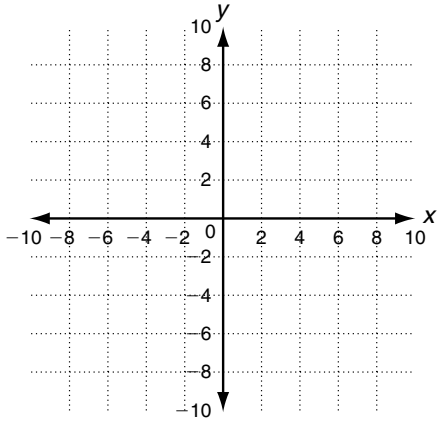
x	−2	−1	0	1	2	3
$f(x)$	7.4	**2.7**				

b. Graph the ordered pairs and draw a curve through the points.

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



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



Simplify. The first one is done for you.

4. $\ln e^{7x}$

$\ln_e e^{7x} = y$

$e^{y} = e^{7x}$

$y = \mathbf{7x}$

5. $\ln e^{x+4}$

6. $e^{\ln x}$

7. $e^{3 \ln x}$

8. $e^{5 \ln (x+1)}$

9. $\ln e^{x-1}$

Solve.

10. Use the formula $A = Pe^{rt}$ to find the total amount of an investment of $5000 at 6% interest compounded continuously for 8 years.

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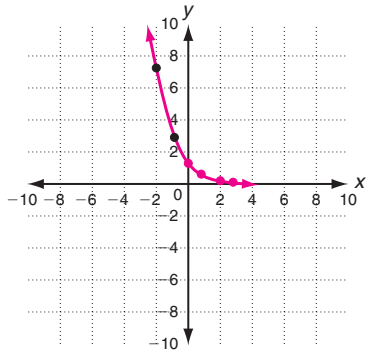
LESSON 7-6

Practice A

The Natural Base, e

Graph each exponential function. The first one is started for you.

1. $f(x) = e^{-x}$

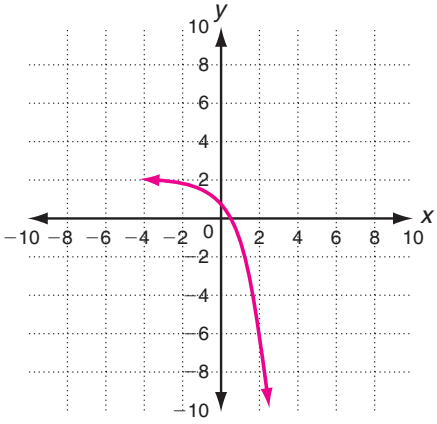


a. Complete the table.

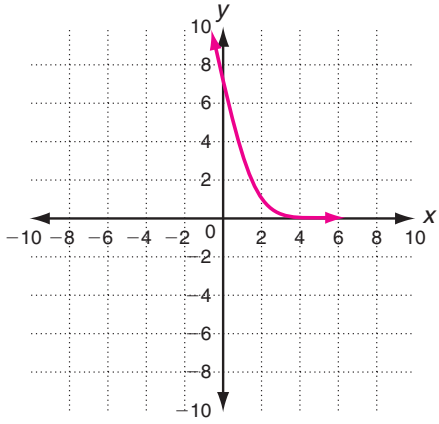
x	−2	−1	0	1	2	3
$f(x)$	7.4	2.7	1	0.37	0.14	0.05

b. Graph the ordered pairs and draw a curve through the points.

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



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



Simplify. The first one is done for you.

4. $\ln e^{7x}$

$\ln_e e^{7x} = y$

$e^{y} = e^{7x}$

$y = \frac{7x}{6}$

5. $\ln e^{x+4}$

$x + 4$

6. $e^{\ln x}$

x

7. $e^{3 \ln x}$

x^3

8. $e^{5 \ln (x+1)}$

$(x+1)^5$

9. $\ln e^{x-1}$

$x - 1$

Solve.

10. Use the formula $A = Pe^{rt}$ to find the total amount of an investment of $5000 at 6% interest compounded continuously for 8 years.

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