Name _____ Date _____ Class _____

TEKS 2A.4.A

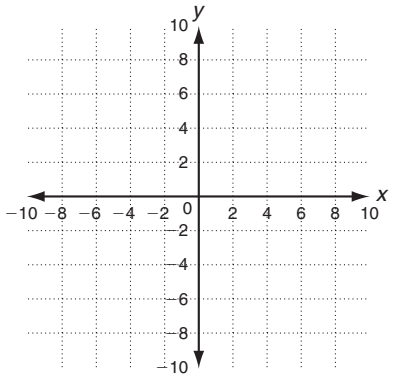
LESSON 7-6

Practice B

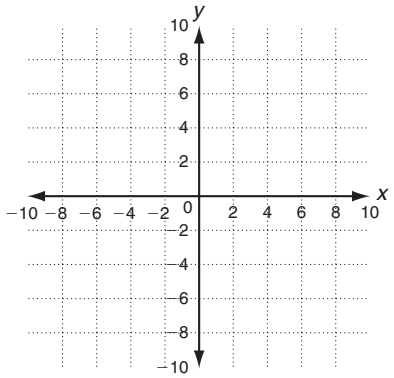
The Natural Base, *e*

Graph.

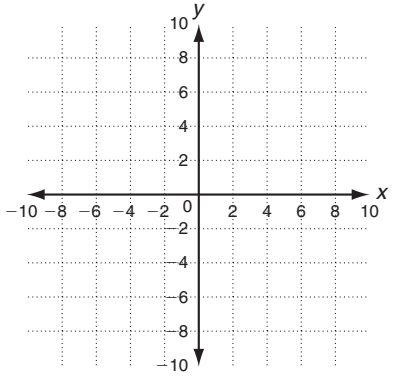
1. $f(x) = e^{2x}$



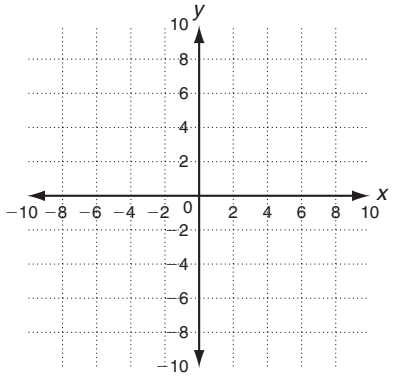
2. $f(x) = e^{0.5x}$



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



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



Simplify.

5. $\ln e^{x+2}$

_____

6. $e^{\ln 2x}$

_____

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

_____

8. $\ln e^{3x+1}$

_____

9. $\ln e$

_____

10. $\ln e^{2x+y}$

_____

Solve.

11. Use the formula $A = Pe^{rt}$ to compute the total amount for an investment of $4500 at 5% interest compounded continuously for 6 years.

_____

12. Use the natural decay function, $N(t) = N_0e^{-kt}$, to find the decay constant for a substance that has a half-life of 1000 years.

_____

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TEKS 2A.4.A

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The Natural Base, *e*

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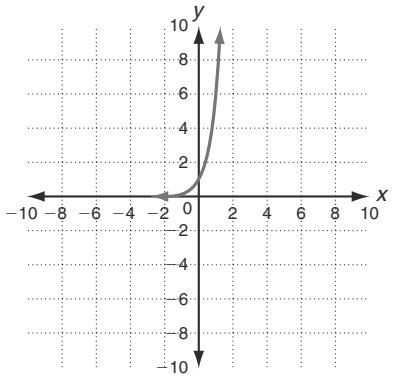

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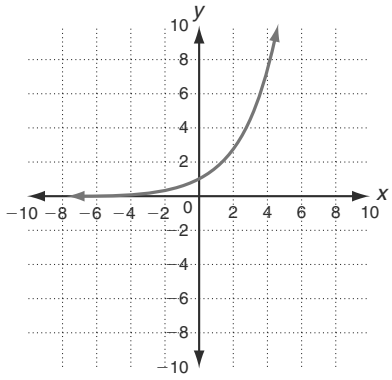

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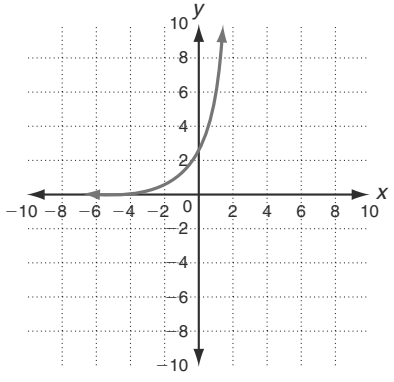
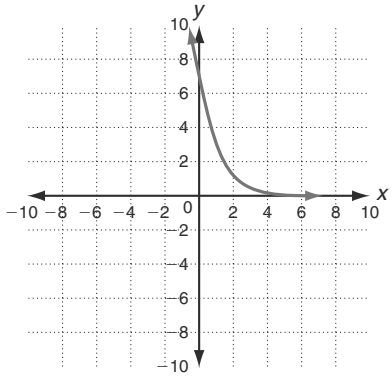


4. $f(x) = e^{2-x}$



Simplify.

5. $\ln e^{x+2}$

$x + 2$

6. $e^{\ln 2x}$

$2x$

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

x^7

8. $\ln e^{3x+1}$

$3x + 1$

9. $\ln e$

1

10. $\ln e^{2x+y}$

$2x + y$

Solve.

11. Use the formula $A = Pe^{rt}$ to compute the total amount for an investment of \$4500 at 5% interest compounded continuously for 6 years.

$6074.36

12. Use the natural decay function, $N(t) = N_0e^{-kt}$, to find the decay constant for a substance that has a half-life of 1000 years.

0.000693

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