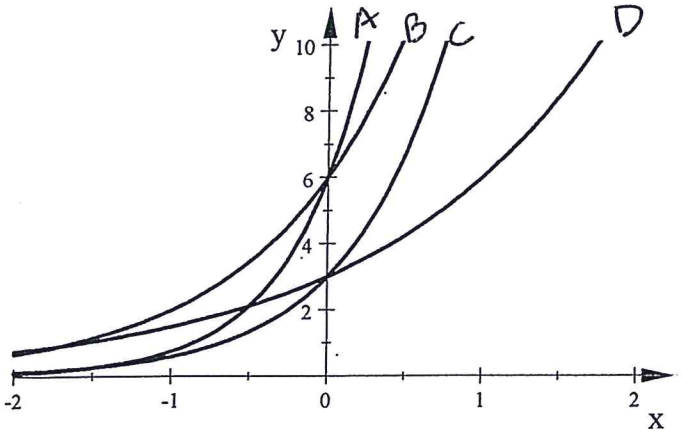
Algebra 2 Bellwork Monday, June 6, 2016

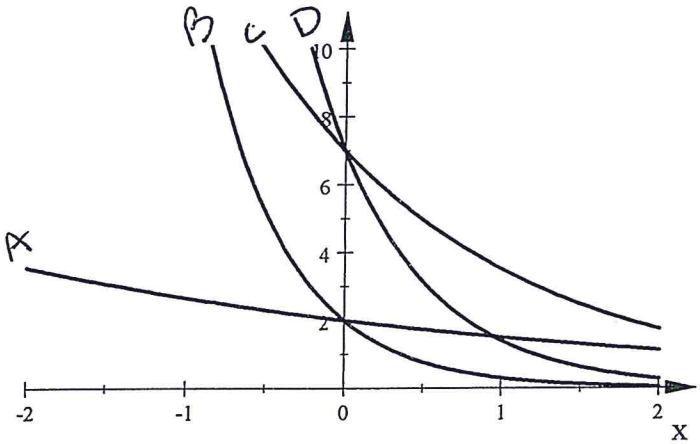
Match each exponential equation to its graph.

1. $y = 3(5)^x$ 2. $y = 6(8)^x$ 3. $y = 3(2)^x$ 4. $y = 6(3)^x$



Match each exponential equation to its graph.

5. $y = 7(0.5)^x$ 6. $y = 2(0.15)^x$ 7. $y = 2(0.75)^x$ 8. $y = 7(0.2)^x$



9. The value of a house last year was $175,400. This year the value of the house decreased by 6% compared to last year. What is the value of the house this year?

10. The population of a city in 2012 was 24,400. The population has been increasing by 3.5% each year.

a) Find the population in 2013.

b) Find the population in 2014.

c) Find the population in 2015.

d) Find the population in 2025.

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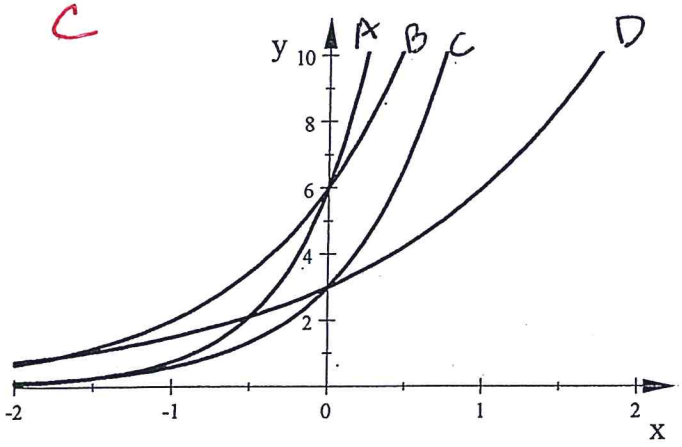
Answers

Match each exponential equation to its graph.

1. $y = 3(5)^x$ C
2. $y = 6(8)^x$ A
3. $y = 3(2)^x$ D
4. $y = 6(3)^x$ B



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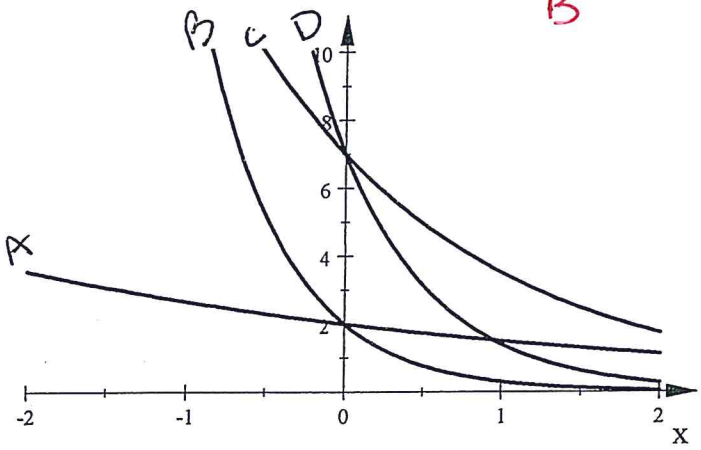

9. The value of a house last year was $175,400. This year the value of the house decreased by 6% compared to last year. What is the value of the house this year?

$100\% - 6\% = 94\%$

$\Rightarrow .94$

$(175,400)(.94) =$ \$164,876

10. The population of a city in 2012 was 24,400. The population has been increasing by 3.5% each year. $100\% + 3.5\% = 103.5\% \rightarrow 1.035$

a) Find the population in 2013. $(24,400)(1.035) = 25,254$

b) Find the population in 2014. $(24,400)(1.035)(1.035) = 26,138$

c) Find the population in 2015. $(24,400)(1.035)(1.035)(1.035) = 24,400(1.035)^3 = 27,053$

d) Find the population in 2025. $24,400(1.035)^{13} = 38,161$