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Exponential Decay worksheet

Determine which of the following functions are exponential growth, exponential decay or neither.

1. $y=-\left(\frac{2}{3}\right)^{x}$
2. $y=\left(\frac{4}{3}\right)^{x}$
3. $y=5^{x}$
4. $y= \left(\frac{1}{4}\right)^{x}$
5. $y=(1.6)^{x}$
6. $y=-\left(\frac{6}{5}\right)^{x}$
7. $y=(0.99)^{x}$

Graph the following exponential functions

8. $y=(\frac{1}{2})^{x}$

9. A discount retailer advertises that items will be marked down at a rate of 10% per week until sold. The initial price of one item is $50.

Write an exponential decay function to model the price of the item x weeks after it is first put on the rack.

What will the price be after the item has been on display for 5 weeks?

After how many weeks will the item be half its original price?