Match the graphs with their equations
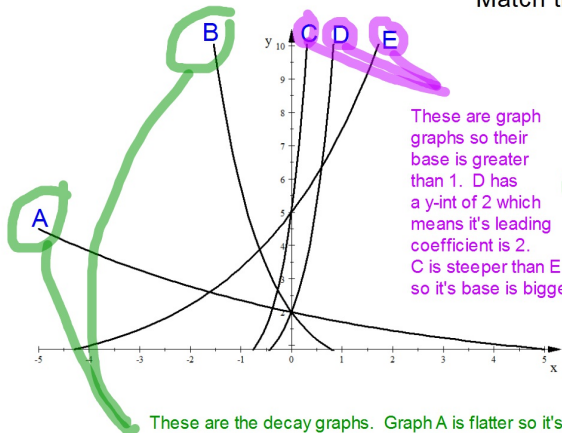
1. $Y = 2(7)^X$ ___D___

2. $Y = 5(1.5)^X$ ___E___

3. $Y = 2(0.85)^X$ ___A___

4. $Y = 5(10)^X$ ___C___

5. $Y = 2(0.35)^X$ ___B___

These are graph graphs so their base is greater than 1. D has a y-int of 2 which means it's leading coefficient is 2. C is steeper than E so it's base is bigger.

These are the decay graphs. Graph A is flatter so it's base is closer to 1.

Which of the values below, if any, could not be solutions to this logarithmic equation:

$$\log x + \log(5 - x) = 2$$

a) $x = 3$ b) $x = -1$ c) $x = 6$

These can't be solutions because when substituted for x you would be taking the logarithm of a negative number which you can't do. That is, the domain of a logarithm is positive numbers only.

Solve.

$$2\log_3 5x + 1 = 9$$
$$ -1 \quad -1$$

$$\frac{2\log_3 5x}{2} = \frac{8}{2}$$

$$\log_3 5x = 4$$

change to an exponential equation.

$$3^4 = 5x$$

$$\frac{81}{5} = \frac{5x}{5}$$

$$x = 16.2$$