Name _____
Chapters 7-8 Review - A

1. Solve the system: $\begin{array}{l} y = x - 2 \\ 2x + 2y = 4 \end{array}$

2. Simplify: $\dfrac{3x^{-2}y}{6y^{-4}}$

3. Write the exponential function model to represent the following situation: You invest $500 and earn 2.5% interest each year.

4. Identify the following equations as growth or decay. Explain your answer:

   a) $y = 20(1.07)^t$

   b) $y = 1000(0.85)^t$

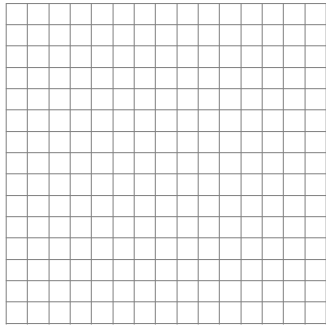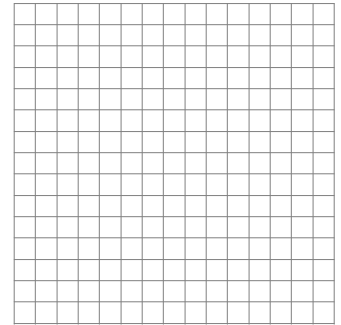5. Simplify: $(a^{-3}b)(a^3b^5)b^{-7}$

Name _____
Chapters 7-8 Review - B

1. Jim bought ten items. He bought socks and gloves. The socks were $4 and the gloves were $7. He spent a total of $43. How many pairs of socks and pairs of gloves did Jim buy?

2. Is the following equation a growth or decay model? Explain your answer. $y = \left(\dfrac{1}{3}\right)^x$

3. Graph the following exponential function:
$y = 4^x$

4. Simplify: $\dfrac{(3x^5 y)^2}{9x^{-1}}$

Name _____
Chapters 7-8 Review - C

1. Sonny bought an antique for $500 whose value doubles. What is the item's value in 4 years?

2. Solve this system of equations: $\begin{aligned} y &= 3x - 4 \\ y &= x + 2 \end{aligned}$
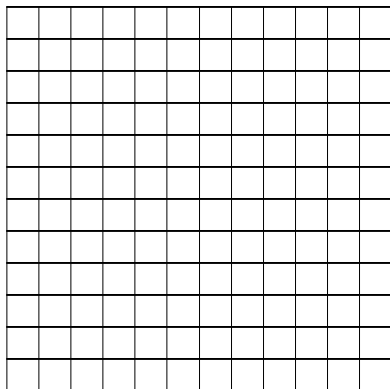
3. Simplify: $\dfrac{(j^{-1}k^2)^{-3}}{jk}$

4. Write an exponential function that is an example of **DECAY** and an exponential function that is an example of **GROWTH**.

   Growth:

   Decay:

5. Graph: $y = \left(\dfrac{1}{3}\right)^x$