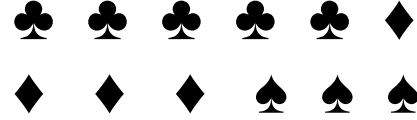Ratios/Rates/Proportions/Percents   Name:_____

Part I: Express each ratio three different ways. Reduce your ratios if possible.

1) Clubs to spades: _____

2) Diamonds to clubs: _____

3) Diamonds to all suits: _____

4) Spades to all suits: _____

♣ ♣ ♣ ♣ ♣ ♦

♦ ♦ ♦ ♠ ♠ ♠

Part II: Solve. Show all work.

5.)	6.)	7.)
$\dfrac{x}{24} = \dfrac{3}{4}$	$\dfrac{2}{3} = \dfrac{q}{48}$	$\dfrac{5}{8} = \dfrac{20}{m}$

Part III: Solve. Use a variable to stand for the unknown amount. Use the given boxes for your labels.

8) Rob used 5 slices of bologna for every 3 slices of bread he used. How many slices of bread will he need for 35 slices of bologna?

$$\boxed{}$$
$$\boxed{}$$ $\dfrac{\quad}{\quad} = \dfrac{\quad}{\quad}$

9) Farmer Joe has lots of rabbits and lots of predators on his farm. Only 3 out of every 10 rabbits live long enough to reproduce. At this rate, how many rabbits will there need to be in order for 27 of them to reproduce?

$$\boxed{}$$
$$\boxed{}$$ $\dfrac{\quad}{\quad} = \dfrac{\quad}{\quad}$

10) Bonnie's recipe calls for 4 cups of brown sugar for every 3 cups of good old granulated sugar. If she needs 24 cups of brown sugar, how much total sugar will she need?

$$\boxed{}$$
$$\boxed{}$$ $\dfrac{\quad}{\quad} = \dfrac{\quad}{\quad}$
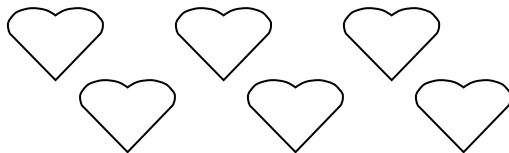
Part IV: Percents. Use proportions.

11) $\dfrac{7}{50}$

12) $\dfrac{11}{25}$

13) Roger liked 80% of the movies he saw last year. If he liked 60 movies, how many did he see?

$$\boxed{} \quad \dfrac{}{} = \dfrac{}{}$$

Part V: Misc.

14) *Shade 1/3 of the hearts below.*

15) *What is the ratio of shaded to un-shaded above?*

16) *What percent of the hearts are shaded?*

17) *How many more unshaded hearts would you need to draw to make the ratio of shaded to un-shaded hearts 1:4?*