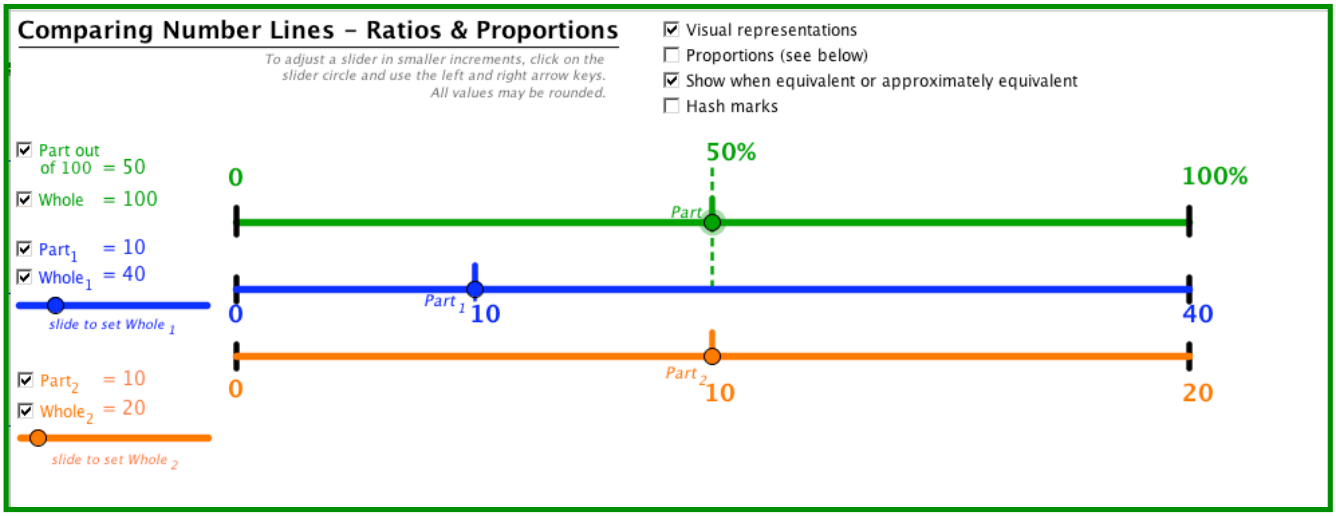
Name: _____
Class/Block: _____ Date: _____

Exploration: Ratio & Proportion (2)
version b

Step 1: Launch the Comparing Number Lines: Ratios & Proportions applet.



Notice the three number lines.

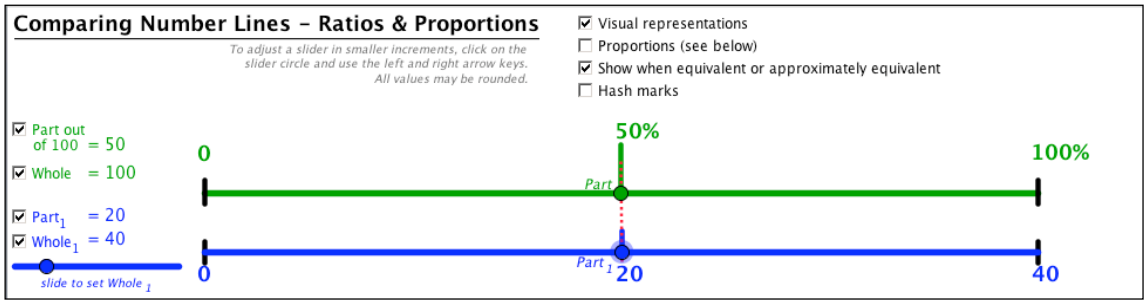
- The first line (green) represents the whole. 50% of the whole 100% is shown by the dotted line.
- The second line (blue) represents the ratio 10 out of 40.
- The third line (orange) represents the ratio 10 of 20.

Step 2: Set up the following proportion: $\frac{50\%}{100\%} = \frac{20}{40}$

a) First, ***uncheck*** the bottom part and whole. (Next to the orange number line.)

b) Next, notice **Whole$_1$** is **40**. (If it is not, drag the blue dot below the **Whole$_1$** until it is **40**.)

c) Then, adjust the **Part$_1$** to be **20** by clicking on the ***blue dot*** and dragging it to the right.



d) Check the ***Proportions (see below)*** checkbox

e) Check the ☑ Ratio$_1$ and Percent checkbox

f) Notice the ratios are equivalent. ☑ Ratio$_1$ and Percent $\frac{20}{40} = \frac{50}{100}$

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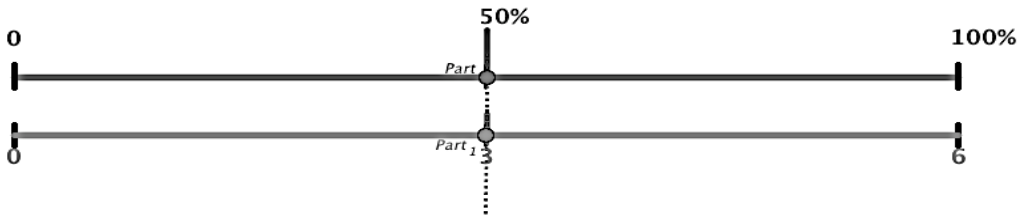
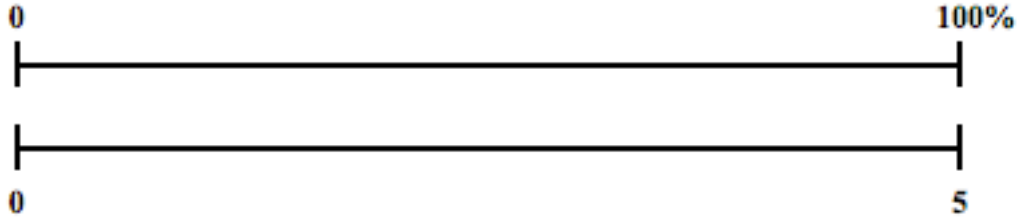
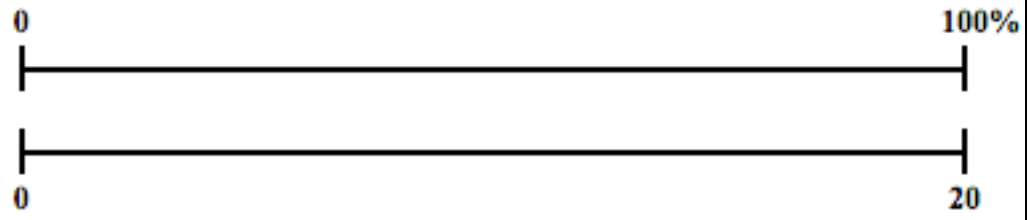
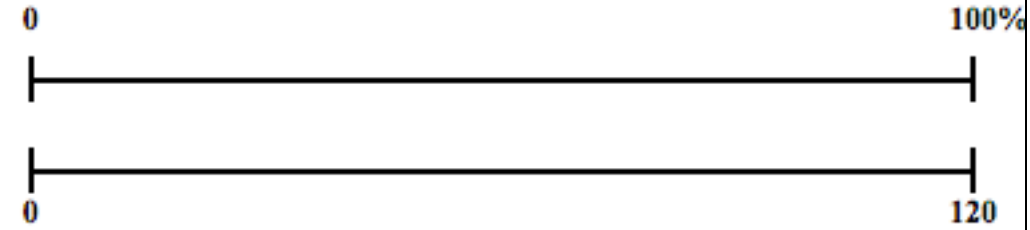
Part I. You are provided a ratio. Find the corresponding percent.
First, check the ***Hash Marks*** box. This will allow you to change the number of intervals shown.
Use the double number line to represent your solution. Check your prediction using the applet.

#	Ratio	Solution/Explanation
1.	$\frac{3}{6}$ Make 2 equal intervals.	 ***3 is 50% of 6*** ***You can see that 3 is half way to 6 which is the same as 50% of 100%.***
2.	$\frac{3}{4}$ Make 4 equal intervals.	 **3 is 75 % of 4**
3.	$\frac{2}{5}$ Make 5 equal intervals.	 **2 is _____% of 5**
4.	$\frac{15}{25}$ Make 5 equal intervals.	 **15 is _____% of 25**
5.	$\frac{30}{120}$ Make 10 equal intervals.	 **30 is _____% of 120**

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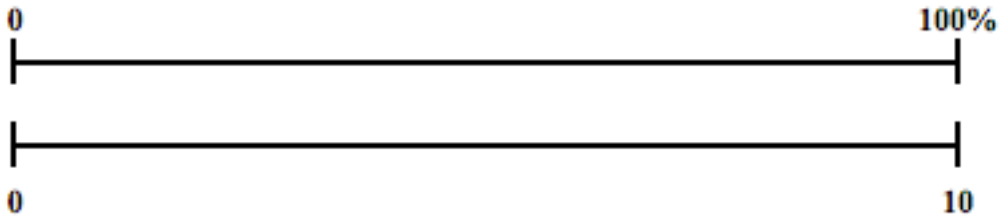
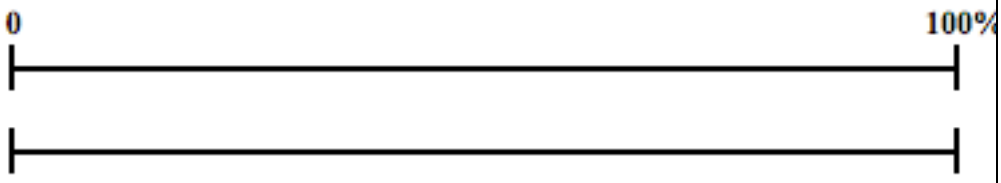
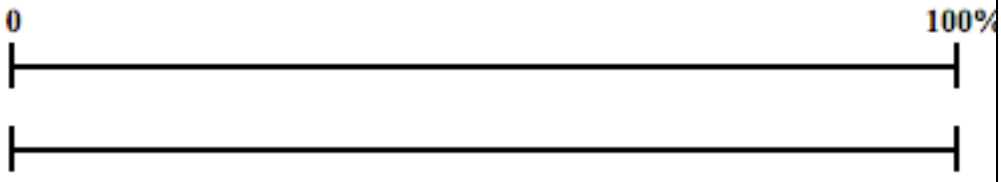
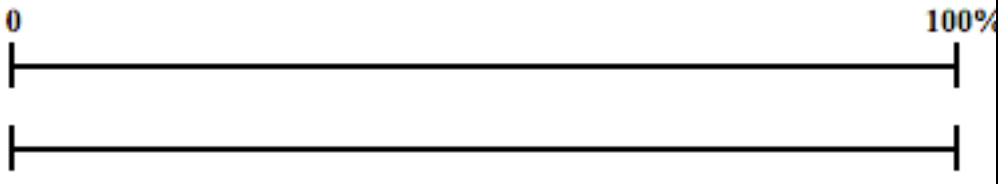
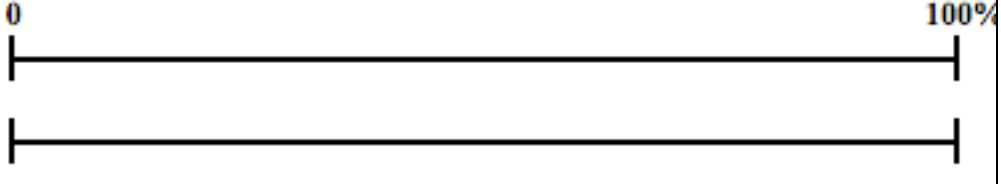
Part II. Select an appropriate interval to help estimate the percent.

#	Ratio	Solution/Explanation
6.	$\frac{7}{10}$	 **7 is _____% of 10**
7.	$\frac{6}{8}$	 **6 is _____% of 8**
8.	$\frac{3}{5}$	 **3 is _____% of 5**
9.	$\frac{18}{25}$	 **18 is _____% of 25**
10.	$\frac{28}{140}$	 **28 is _____% of 140**