

Pre-Algebra Problem Set 6 First Name _____ Last _____

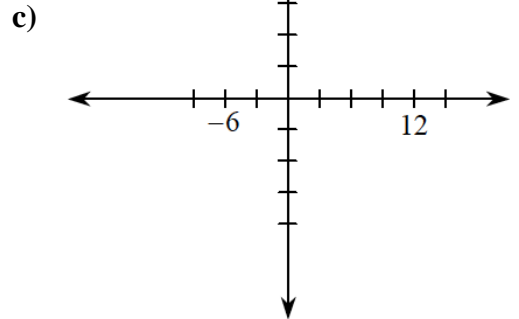
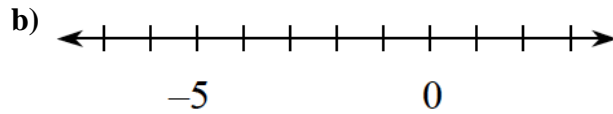
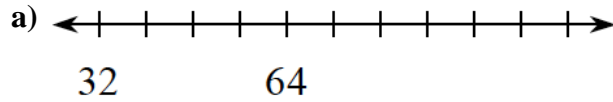
Assigned Thursday 10/10, due Friday 10/18

NO Work Shown, NO Credit Given

Period _____

Problem #1-#4 can be completed on this paper. The work for problems #5-12 needs to be attached on a separate piece of paper.

1. Copy the graphs below onto your paper. Then complete the scale by labeling the remaining tick marks.



2. Rewrite each number below as a single fraction greater than one.

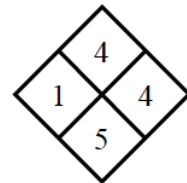
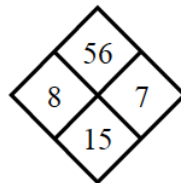
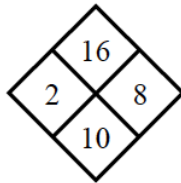
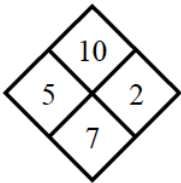
a) $1\frac{7}{11}$

b) $3\frac{2}{7}$

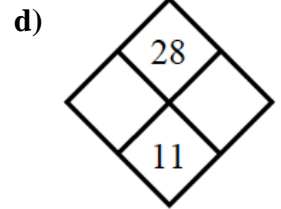
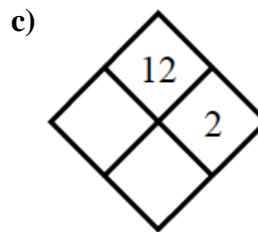
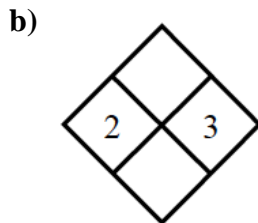
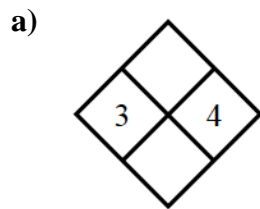
c) $2\frac{4}{15}$

d) 12

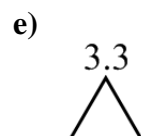
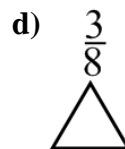
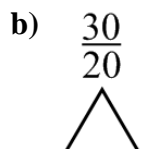
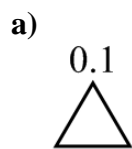
3. Finding patterns is an important problem-solving skill used in mathematics. You will use the patterns in Diamond Problems to solve other problems later in the course. Can you discover a pattern for the numbers in each of the four diamonds below?

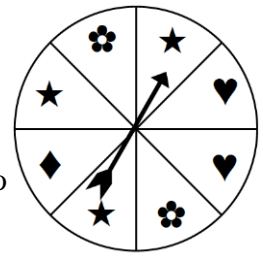



Use the pattern you discovered to complete each Diamond Pattern below:





4. Complete each portion web.





5. Lila is making a spinner game for her cousins to play. She has divided it into 8 equal sections and has labeled each section with a symbol. When the spinner lands on a , her cousins will win a prize.

- What is $P(\star)$? Express your answer as a fraction, as a decimal, and as a percent.
- What is the probability of not getting ? Write your answer as a fraction, as a decimal, and as a percent.
- What is $P(\text{flower})$? Write your answer as a fraction, as a decimal, and as a percent.
- If Lila's cousins spin 100 times, about how many times would you expect them to spin a ?

6. Approximately 3 out of every 25 Americans live in California. About 3 out of every 50 Americans live in New York, and about 2 out of every 25 Americans live in Texas.

- Which state has the largest population?
- Which state has the smallest population?
- About what percentage of Americans do *not* live in California, New York, or Texas?

7. Here are the lengths (in inches) of snakes in a reptile display: 10, 31, 36, 36, 37, and 42. Find the mean and median of the lengths. Please label the answers as “mean” and “median”.

8. Mario ordered a pizza for dinner. When it arrived, Mario quickly ate $\frac{1}{8}$ of the pizza. While Mario was getting napkins, his pet poodle ate $\frac{1}{3}$ of the pizza.

- Draw a model of the pizza that shows the portion that has been eaten.
- What fraction of the pizza is left?

9. Nicole has a machine that will produce a number from 1 through 50 at random when she pushes a button. If she pushes the button, what is:

- $P(\text{multiple of } 10)$? **b)** $P(\text{not } 100)$? **c)** $P(\text{not a multiple of } 4)$? **d)** $P(\text{one-digit number})$?

10. Lyle and his study team are designing spinners.

- If two thirds of the sections on a spinner are green and there are 15 sections, how many are green?
- If three fourths of the sections on a different spinner have stripes and there are 24 sections, how many sections have stripes?

11. Thomas has a bag with 7 green marbles, 5 blue marbles, and 8 red marbles. For each part below, if the marble selected is replaced before the next marble is drawn, find the probability for the given draw. Write your answer as a fraction, as a decimal, and as a percent.

- A red marble? **b)** A red or green marble? **c)** An orange marble?

12. Find the area of each figure.

