Rate and Unit Rate Word Problems

Double Number Line/ Unit Rate Problems

Basic Reviews

1. Amy drove to her mother's house, which is 204 miles away. If it took her 3 hours, what was her average speed?

2. Four gallons of gasoline cost $16.80. What is the price per gallon?

3. A T-shirt launcher can launch 5 shirts in 20 minutes. What is the rate in shirts per hour?

Two- Step Rate Problems: Asking for more!

4. Four gallons of gasoline cost $16.80.
 (a) What is the price per gallon?
 (b) What is the price of gasoline in terms of gallons per dollar?
 (c) Do we need both rates? In real life, when will each rate become useful?

5. Ashley needs to ride her bike to her friend's house 96 miles away. She is riding at an average rate of 15 miles per hour. She has 6 hours to get there. Will she make it?

6. Ed drives from Jefferson to Holden, a distance of 250 miles. He then travels on to Paxton, which is 50 miles from Holden. If it takes him 5 hours to complete the entire trip, how fast was he traveling if he is traveling at a constant speed?

7. Which is the best buy?
       6 shirts for $25.50   4 shirts for $18.00   5 shirts for $21

8. Lauren took 12 hours to read a 360 page book. At this rate, how long will it take her to read a 400 page book?

9. Pat wants to enter a typing contest. In order to enter, one has to be able to type 50 words per minute.   Pat took 15 seconds to type 10 words. Can he enter the contest?

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Differentiated Rate Problems:
Choose the level for your students- Part a: Basic Review
Part b: Asking for more
Part c: Stepping beyond

10. Five lemons cost $1.80.
     a. What is the cost per lemon?
     b. At this rate, what is the cost of 9 lemons?

11. David hikes 2 ¼ miles in ½ an hour.
     a. What is his rate in miles per hour?
     b. At this rate, how long will it take him to walk 18 miles?
     c. If he walks for 7 hours, how far will he have gone?

12. Erica babysits for 4 ½ hours and is paid $27.
     a. How much does she make per hour?
     b. How much does she make for 8 hours?
     c. If the people she babysits for have $34 to pay her, how long can they stay out?

13. Michael is headed to his aunt's house. For the first 2 hours he drives at 55 mph. For next hour, he drives 70 mph. For the final 2 hours he drives 50 mph.
     a. How far does he travel?
     b. What is his average speed for the entire trip?
     c. If he drives the entire trip at 70 mph, how much less time will it take?

14. John took a 5 ½ mile walk to his friend's house. He left at 11 a.m. and arrived at his friend's house at 1 p.m.
     a. What was his average speed of walking?
     b. If the return trip took a half hour longer, how much lower was his average speed on the return trip than on the trip to his friend's house?

15. Tom jogged from 10:30 a.m. to 12:15 p.m. He traveled a distance of 7 miles.
     a. What was his average rate of jogging?
     b. At 12:15 p.m., he decided to go an additional 5 miles at the same rate. At what time should he finish the additional 5 miles?

EduTron

Name: _____   Date: _____   Period: _____

Unit Rate Word Problems

SHOW ALL YOUR WORK AND LABEL!!!!

1) You can buy 3 apples at Quick Market for $1.17. You can buy 5 of the same apples at Stop and Save for $2.40.

     a. Which store is the better buy?

     b. How much will you save per apple if you purchase it from the cheaper store?

2) Gas mileage is the number of miles you can drive on one gallon of gas. A test of a new car results in 450 miles on 10 gallons of gas.

     a. What is the car's gas mileage?

     b. How far could you drive with 60 gallons of gas?

3) The bakers Healthy Bakery can make 160 bagels in 5 hours.

     a. How many bagels can they make in 1 hour?

     b. How many bagels can they make in 12 hours?

4) You can buy 5 cans of green beans at the Market Basket for $2.40. You can buy 10 of the same green beans at Costco for $4.40.
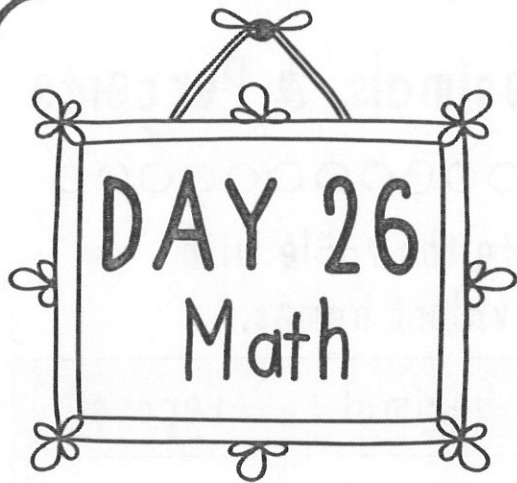
    a. Which is the better buy?

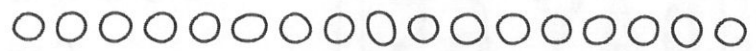   b. How much do you save per can buy making your purchase at the cheaper store?

5) A jet flies 510 miles in 2 hours.

    a. What is the rate of speed of the jet (miles per hour)?

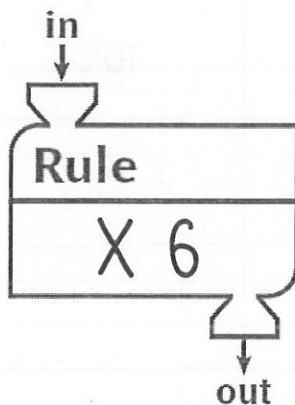   b. At this rate, how far can the jet fly in 15 hours?

6th Grade

DAY 26 Math

What's My Rule, Name Collection Boxes, & Open Sentences

○○○○○○○○○○○○○○○○○○

Solve each open sentence.

$67.3 + p = 75.22$ p= _____

$6.86 - a = 2.94$ a= _____

in ↓

Rule

X 6

↓ out

in	out
2	
	24
5	
	42
9	

in ↓

Rule

↓ out
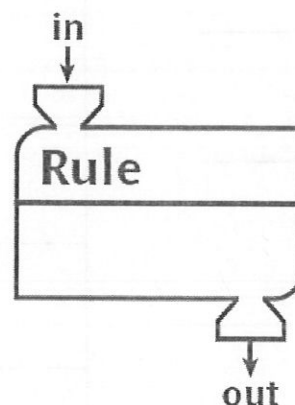
in	out
9	1
	6
45	5
63	
	8

Make six names for 45

45

Insert ( ) to make each number sentence true.

$8 + 9 \times 2 = 34$

$150 \div 2 + 8 = 15$

$3.14 + 9 \times 3 = 36.42$

Solve each open sentence.

$x + 5.69 = 7.91$ x= _____

$4.6 - n = 0.32$ n= _____

DAY 65 Math

Fractions, Decimals, & Percents

○○○○○○○○○○○○○○○○○○

Complete the table with equivalent names.

$\frac{1}{2}$ of 50 = _____

$\frac{2}{3}$ of 30 = _____

$\frac{4}{6}$ of 36 = _____

25% of 100 = _____

10% of 40 = _____

75% of 24 = _____

You buy a toy for $50. You have a coupon for a 10% discount.

How much will you save?

_____

How much will the toy cost?

_____

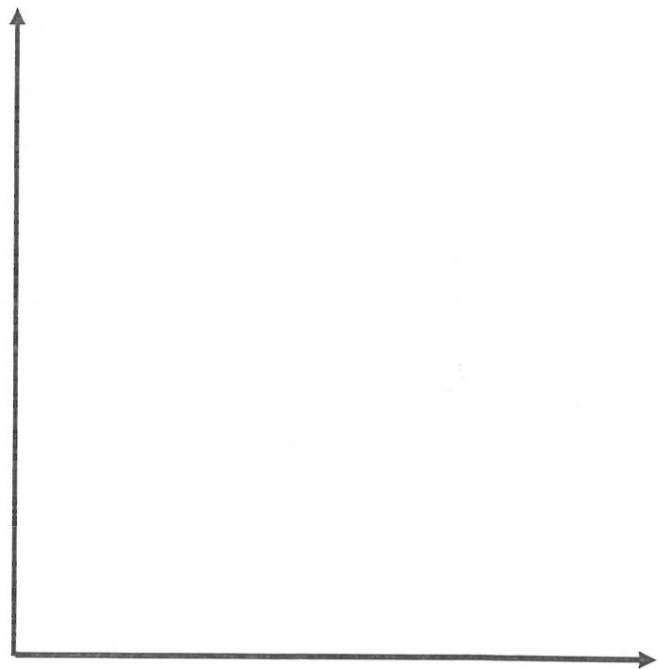| Fraction	Decimal	Percent
	0.36	
		10%
$\frac{1}{2}$		
	0.02	
		75%
$\frac{1}{4}$		
	0.9	
		100%
$\frac{3}{10}$		
	0.82	
		162%

DAY 23 Math
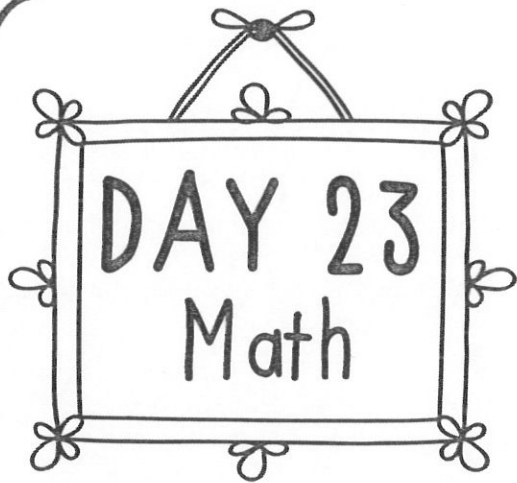
Graphing

The owner of the pet store is keeping track of how many animals he sold each month. Use the data to create a bar graph. Then answer the questions.

Month	Number of Animals Sold
January	5
February	9
March	13
April	10
May	9
June	9
July	21
August	4
September	3
October	9
November	6
December	14

Median? _____

Mode? _____

Maximum? _____

Minimum? _____

Range? _____

MATH BLASTER
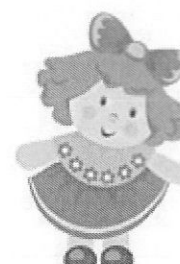
Life-Sized Dolls

What would it be like to wake up as one of the characters in Toy Story? What would all the other toys look like if they were as tall as you are? Find out with this fun proportions activity.

What you will need:

- Various dolls, one for each student
- Ruler/Measuring tape
- Writing material
- Paper

Instructions:

1. Have each of the students bring a doll or stuffed animal to class.
2. Discuss with your students what it would be like to live among the characters from Toy Story.
3. What would the adorable dolls look like if they were the same height as a middle school student? Would they still be as adorable?
4. Have students measure the height of their toys, as well as their own heights.
5. Have them find out how many times bigger than the toy they are.
6. Ask the students to measure the length of important body parts of the toy like the face, the arms, the legs, the torso, etc.
7. Ask the students to measure the breadth of important body parts of the toy where necessary.
8. Have the students use proportions to figure out how long and wide each body part would be if the toys were as tall as the students are.
9. Have them compare these measurements with that of their own body.
10. Discuss what it would be like to meet life-sized versions of the dolls.