7th → 8th Grade Summer Work

Due: 1st full day of school
(*Show all work!!)*

Ms. Scudero

Name: _____

Dividing Fractions

Sheet 1

Find the quotient.

1) $\frac{6}{7} \div \frac{2}{7}$

2) $\frac{1}{4} \div \frac{19}{12}$

3) $\frac{2}{5} \div \frac{7}{9}$

4) $\frac{5}{3} \div \frac{3}{8}$

5) $\frac{3}{4} \div \frac{9}{8}$

6) $\frac{12}{18} \div \frac{17}{9}$

7) $\frac{11}{10} \div \frac{5}{2}$

8) $\frac{15}{17} \div \frac{5}{3}$

Name: _____

Finding Unit Rate

A **Unit Rate** makes a comparison to one unit.

example: 4 burgers for $12 ⟶ $3 per burger

Find the unit rate for each problem.

1. 64 books on 4 shelves _____ books per shelf

2. 36 flowers in 3 bouquets _____ flowers per bouquet

3. 25 rulers in 5 groups _____ rulers per group

4. 45 points in 3 games _____ points per game

5. 10 hours to drive 550 miles _____ miles per hour

6. 24 pieces of candy in 3 bags _____ pieces per bag

7. 92 dollars for 2 video games _____ dollars per video game

8. 42 pages in 6 chapters _____ pages per chapter

9. 3 videos in 15 minutes _____ minutes per video

10. 48 cookies in 4 batches _____ cookies per batch

11. 21 bananas in 3 bunches _____ bananas per bunch

12. 100 meters to swim 4 laps _____ meters per lap

13. 108 items in 12 boxes _____ items per box

14. 216 blueberries in 6 baskets _____ blueberries per basket

15. 35 people at 7 tables _____ people per table

Percent Calculations (A)

Calculate the percent or value requested.

1. What is 37% of 600?
2. What is 51% of 200?
3. What is 86% of 950?
4. What is 71% of 1,000?
5. What is 26% of 150?
6. What is 13% of 100?
7. What is 58% of 300?
8. What is 9% of 200?
9. What is 58% of 750?
10. What is 17% of 600?

Basic Pre-algebra Skill

Solving Proportions

Solve each proportion.

1) $\frac{5}{8} = \frac{7}{v}$

2) $\frac{3a}{4} = \frac{2}{8}$

3) $\frac{9}{2} = \frac{n}{7}$

4) $\frac{n}{2} = \frac{5}{4}$

5) $\frac{8}{k} = \frac{10}{5}$

6) $\frac{4}{2} = \frac{7}{x}$

7) $\frac{a}{6} = \frac{3}{10}$

8) $\frac{4}{6} = \frac{x}{9}$

9) $\frac{6}{3} = \frac{7}{n}$

10) $\frac{8}{4} = \frac{n}{5}$

11) $\frac{x}{7} = \frac{10}{3}$

12) $\frac{8}{4} = \frac{7}{x}$

13) $\frac{5}{6} = \frac{10}{n}$

14) $\frac{8}{n} = \frac{9}{4}$

15) $\frac{7}{9} = \frac{10}{n}$

16) $\frac{8}{5} = \frac{6}{p}$

17) $\frac{6}{2} = \frac{n}{6}$

18) $\frac{9}{5} = \frac{10}{n}$

19) $\frac{10}{8} = \frac{8}{b}$

20) $\frac{9}{8} = \frac{10}{r}$

21) $\frac{10}{3} = \frac{x}{4}$

22) $\frac{2}{6} = \frac{x}{3}$

23) $\frac{4}{5} = \frac{b}{6}$

24) $\frac{8}{2} = \frac{7}{k}$

Name : _____ Score : _____

Teacher : _____ Date : _____

Word Problems

1) At a construction job for a mall, 14 painters were tasked with painting the interior. These painters made up 35% of the painting crew, so how many painters in all worked on this job? Round your answer to the nearest whole number if necessary. _____

2) While mining, Mike found a large metal bar that weighed 30 ounces. Mike was also able to determine that the bar contained 20% silver. How many ounces of silver are in the metal bar? Round your answer to the nearest whole number if necessary. _____

3) Mary went to her local zoo that featured 15 canine exhibits. If the zoo features 25 exhibits in total, then what percent of the zoo's exhibits feature canines? Round your answer to the nearest whole number if necessary. _____

4) At a local department store, cardigans have been reduced to $24. This price is at 75% of the original price for cardigans. Given this, what was the original price of the cardigans? Round your answer to the nearest whole number if necessary. _____

5) Joan has to spend $36000 on expenses each year. If that amount of money is 90% of her salary, then how much money does Joan make working as an executive per year? Round your answer to the nearest whole number if necessary. _____

6) There are 16 students in a class and 4 of these students passed their Chemistry test. What percentage of these students passed their test? Round your answer to the nearest whole number if necessary. _____

7) For one History test, Peter had to answer 25 questions. Of these questions, Peter answered 80% of them correctly. How many questions did Peter correctly answer on his test? Round your answer to the nearest whole number if necessary. _____

8) Benny decided to look at new and used trucks. Benny found a new truck for $30000. Typically a used truck goes for 80% of a new truck, so what price would a used truck be? Round your answer to the nearest whole number if necessary. _____

9) In one particular suburb, 20% of families own a bulldog. If there are a total of 30 families in this neighborhood that own a dog in general, then how many dog owners own a bulldog? Round your answer to the nearest whole number if necessary. _____

10) One baseball team played 15 games throughout their entire season. If this baseball team won 9 of those games, then what percentage of their games did they win? Round your answer to the nearest whole number if necessary. _____

Evaluating Algebraic Expressions (A)

Instructions: Evaluate each algebraic expression with the given values.

$m + 5q$; where $m = 1$, and $q = 5$

$(y - x)^3$; where $x = 1$, and $y = 3$

$q(p + 2)$; where $p = 4$, and $q = 3$

$y + y - x$; where $x = 6$, and $y = 5$

$(z + y) \div 6$; where $y = 6$, and $z = 6$

$h(j - h)$; where $h = 3$, and $j = 6$

$x + y + y$; where $x = 5$, and $y = 2$

$z^2 - y$; where $y = 4$, and $z = 3$

$b(4 + a)$; where $a = 6$, and $b = 2$

$m - n + m$; where $m = 5$, and $n = 1$

$(h + j) \div 6$; where $h = 2$, and $j = 4$

Pre-Algebra: Week 2 Day 4 Name_____

Simplify Expressions: Combining Like Terms and the Distributive Property: Day 2

Simplify each expression.

1) $-10b + b$

2) $-x - 3x$

3) $1 + 5v + v$

4) $-7n - 7 - 8 + 10n$

5) $5k + 7k$

6) $a - 2 + 1 + 4a$

7) $8(x + 10)$

8) $8(1 + 6p)$

9) $-5(-7 + 7n)$

10) $-(9m + 7)$

11) $-(1 - 5x)$

12) $-4(7r + 7)$

13) $-2(n-9)+4$

14) $-6+9(8-2b)$

15) $6x-3(2-3x)$

16) $-8(-2r-2)-6r$

17) $-3(a+1)+6$

18) $-2(-3-3n)+1$

19) $3(1+2v)-3(1+4v)$

20) $4(x-10)-6(x-4)$

21) $4(10x+6)-10(9x+9)$

22) $10(9+8n)-6(7n+9)$

23) $7(1+10p)+8(1+6p)$

24) $10(3+8k)+9(k+3)$

Name : _____

Factoring Linear Expressions

Sheet 1

Factorize each linear expression.

1) $6x + 9$

2) $-20y - 5z$

3) $15 - 3a$

4) $2m + 2$

5) $39u - 52v + 13$

6) $10z - 60$

7) $44p + 11q$

8) $42 + 35w$

9) $81n - 36$

10) $40b - 80c - 40d$

Name : _____

One-Step Equations: Integers

Mul/Div Level 1: S1

Solve each equation.

1) $3x = 36$

2) $\frac{y}{9} = 3$

3) $5p = 25$

4) $14 = \frac{a}{2}$

5) $\frac{r}{8} = 4$

6) $24 = 6c$

7) $\frac{q}{11} = 1$

8) $8u = 40$

9) $10 = \frac{w}{3}$

10) $7z = 7$

Name : _____

Two-Step Equations: Whole Numbers

Solve each equation.

1) $9c + 1 = 10$

2) $6y - 5 = 7$

3) $8 = 3a - 4$

4) $\frac{m}{5} + 9 = 11$

5) $13 + 7x = 27$

6) $17 - q = 6$

7) $\frac{n - 31}{4} = 2$

8) $1 + 2r = 35$

9) $42 + 5t = 8t$

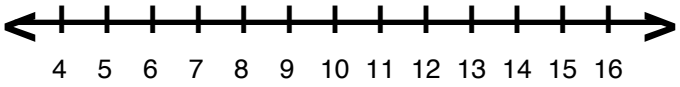
10) $4p - 3 = 17$

Name : _____ Score : _____

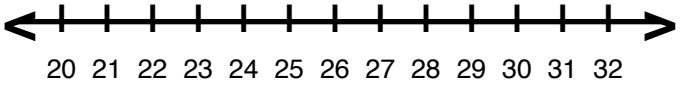
Teacher : _____ Date : _____

Solve and Graph the Inequalities

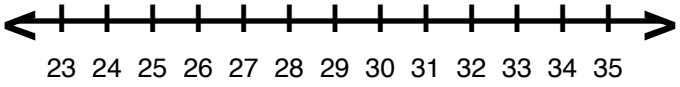
1) $-6r \geq -78$



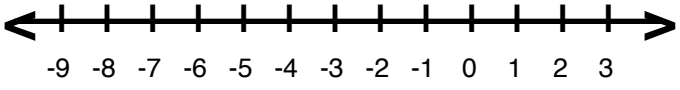
2) $\frac{k}{2} < 13$



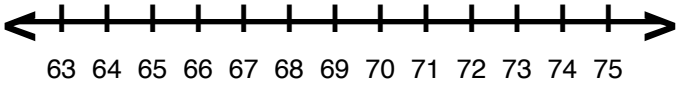
3) $8 \leq \frac{v}{4}$



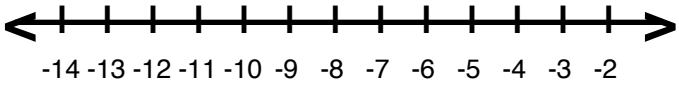
4) $-5f \leq 25$



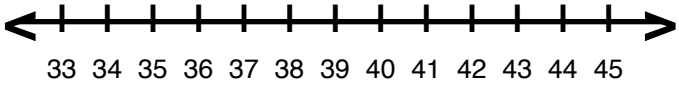
5) $12 > \frac{g}{6}$



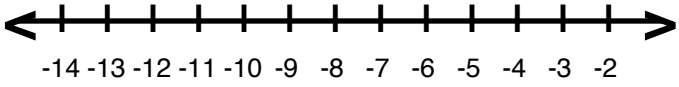
6) $32 < -4y$



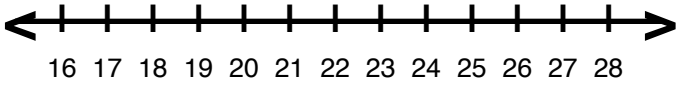
7) $5 \geq \frac{n}{7}$



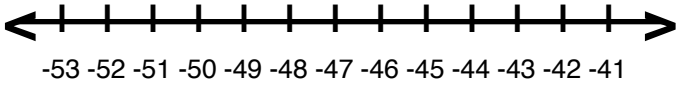
8) $49 \leq -7b$



9) $\frac{d}{2} > 12$



10) $\frac{a}{4} < -12$



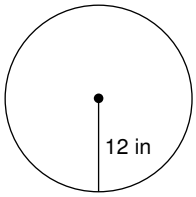
 Name_____

Circumference and Area of Circles

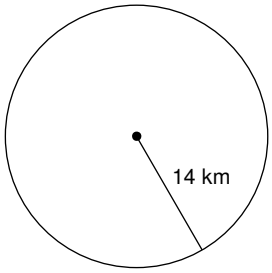
Date_____ Period____

Find the area of each. Use your calculator's value of π. Round your answer to the nearest tenth.

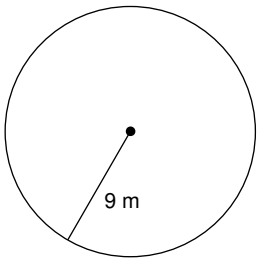
1)



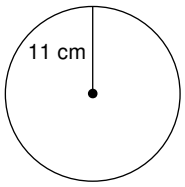
2)



3)



4)



5) radius = 2.6 in

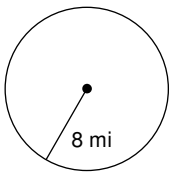
6) radius = 34.1 in

7) radius = 13.2 km

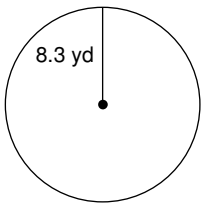
8) radius = 29.9 km

Find the circumference of each circle. Use your calculator's value of π. Round your answer to the nearest tenth.

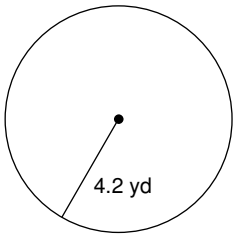
9)



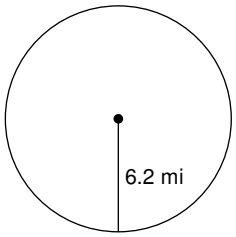
10)



11)



12)



13) radius = 5.2 ft

14) radius = 11.1 ft

15) radius = 9.5 in

16) radius = 9.3 in

Find the radius of each circle. Use your calculator's value of π. Round your answer to the nearest tenth.

17) circumference = 62.8 mi

18) circumference = 69.1 yd

19) circumference = 12.6 yd

20) circumference = 25.1 ft

Find the diameter of each circle. Use your calculator's value of π. Round your answer to the nearest tenth.

21) area = 201.1 in²

22) area = 78.5 ft²

Find the circumference of each circle.

23) area = 64π mi²

24) area = 16π in²

Find the area of each.

25) circumference = 6π yd

26) circumference = 22π in

Critical thinking question:

27) Find the radius of a circle so that its area and circumference have the same value.

Name Date

MEAN, MEDIAN, MODE AND RANGE SHEET 1

Find the mean, median, mode and range in each of the sets of data.
The first one has been done for you.

1)	15, 23, 19, 20, 23		5)	22, 37, 19, 25, 37, 51, 82	
order	15, 19, 20, 23, 23		order		
	Mean 100÷5=20	Median 20		Mean	Median
	Mode 23	Range 23-15=8		Mode	Range
2)	2, 7, 4, 2, 3, 6, 11		6)	6, 2, 13, 7, 6, 11, 10, 6, 2	
order			order		
	Mean	Median		Mean	Median
	Mode	Range		Mode	Range
3)	70, 63, 67, 62, 63		7)	109, 104, 96, 103, 104, 107, 98	
order			order		
	Mean	Median		Mean	Median
	Mode	Range		Mode	Range
4)	11, 4, 7, 8, 2, 6, 4		8)	14, 68, 38, 65, 36, 57, 65	
order			order		
	Mean	Median		Mean	Median
	Mode	Range		Mode	Range