

## 6<sup>th</sup> Grade Assignment – Week #17

### Individual Work:

- See how much you can do on problems #1-30 on Sheet #17 in the workbook.  
**Don't do #31-34, since we will do start doing percents next week.**

### Group Assignments:

#### *For Tuesday: Discovery!*

- Give the prime factorization for each of the following:
  1. 70
  2. 700
  3. 7000
  4. 70,000,000
  5. 130
  6. 13,000
  7. 300,000
  8. 50,000
  9. 8000
- What is the shortcut for doing prime factorization with numbers that end in zeroes?
- *Challenge!* Find the prime factorization of each of the following numbers. (Hint: neither of them is a prime number.)
  10. 213,840
  11. 2047

#### *For Thursday: Puzzles!*

- 1) Counting Marbles  
If Jake counts his marbles in groups of 7, he has 3 left over. If he counts them by 4's, he has 1 left over. How many marbles are there? (There is more than one possible answer. How many answers can you find?)
- 2) Cutting Pizza  
John cut a square pizza into three pieces by first cutting the pizza into two equal-sized rectangles, then cutting one of the rectangles into two squares. He then gave a small (square) piece to each of his two brothers and kept the large piece for himself. How should he then cut two small pieces off the large rectangular piece, so that he can give these small pieces to his brothers, and everyone will end up with an equal amount of pizza?

# 6<sup>th</sup> Grade Math – Sheet #17

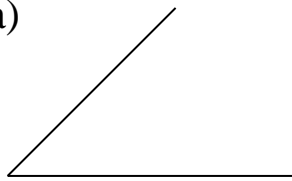
## Do it in your head.

- 1)  $25 \cdot 4$
  - 2)  $16 \cdot 3$
  - 3)  $15 \cdot 4$
  - 4)  $13 \cdot 4$
  - 5)  $2^4$
  - 6)  $3^3$
  - 7)  $4^5$
  - 8)  $5000^2$
  - 9)  $\sqrt{\frac{4}{25}}$
  - 10)  $\frac{11}{12} - \frac{1}{2}$
  - 11)  $\frac{11}{12} \cdot \frac{1}{2}$
  - 12)  $\frac{11}{12} \div \frac{1}{2}$
  - 13)  $9000 \cdot 7000$
  - 14)  $7.34 \div 1000$
  - 15)  $560 \cdot 110$
  - 16)  $5000 \div 4$
  - 17)  $56 \div 32$
  - 18)  $420 \cdot 5$
  - 19)  $420 \div 5$
- Estimate.*
- 20)  $6839 \cdot 5182$
  - 21)  $6839 + 5182$
  - 22)  $591^2$

## Angle Measure.

23) First estimate the size of the angle (in degrees), and then use a protractor to measure it. You may need to extend the lines (with a ruler) in order to get a good reading with your protractor.

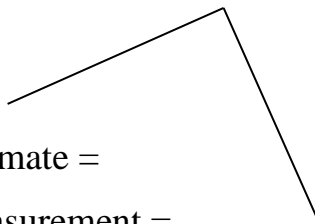
a)



Estimate =

Measurement =

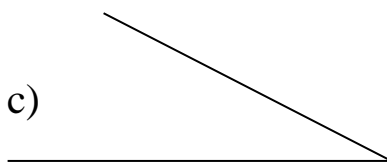
b)



Estimate =

Measurement =

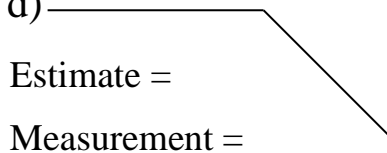
c)



Estimate =

Measurement =

d)



Estimate =

Measurement =

## Decimals.

- 24)  $5080 + 87.42$
- 25)  $5080 - 87.42$
- 26) *Cast out nines to check your answer.*  
 $87.54 \cdot 0.762$

## Prime Factorization.

- 27) Give the prime factorization.
  - a) 300
  - b) 2736
  - c) 816750
- 28) Multiply the prime factorization out.
  - a)  $2^3 \cdot 3$
  - b)  $3^2 \cdot 5 \cdot 23$
  - c)  $2^4 \cdot 5^4 \cdot 13$

**Conversions.**

As with the previous worksheet, before doing any of these, circle the ones that can be done in your head.

29) Convert to a decimal.

- a)  $\frac{5}{8}$
- b)  $\frac{7}{11}$
- c)  $\frac{23}{50}$
- d)  $\frac{23}{30}$
- e)  $\frac{89}{99}$
- f)  $\frac{7}{1000}$
- g)  $\frac{7}{999}$
- h)  $\frac{7}{900}$
- i)  $\frac{53}{99900}$
- j)  $\frac{29}{270}$

30) Convert to a fraction.

- a) 0.3
- b) 0.59
- c) 0.59
- d) 0.059
- e) 0.059
- f) 0.000059
- g) 0.8
- h) 0.110
- i) 0.110
- j) 0.16
- k) 0.31756

31) Fill in the table.

**Fraction    Decimal    Percent**

$\frac{1}{2}$	0.5	50%
$\frac{1}{4}$		
$\frac{3}{4}$		
$\frac{1}{3}$		
$\frac{2}{3}$		
$\frac{1}{5}$		
$\frac{2}{5}$		
$\frac{3}{5}$		
$\frac{4}{5}$		
$\frac{1}{6}$		
$\frac{5}{6}$		
$\frac{1}{8}$		
$\frac{3}{8}$		
$\frac{5}{8}$		
$\frac{7}{8}$		
$\frac{3}{10}$		
$\frac{7}{10}$		
$\frac{1}{20}$		
$\frac{1}{25}$		
$\frac{1}{50}$		
$\frac{7}{100}$		
$\frac{41}{100}$		

**Percents.**

32) Convert each percent to a fraction.

- a) 93%
- b) 3%
- c) 15%
- d) 12%

33) Convert each percent to a decimal.

- a) 93%
- b) 3%
- c) 15%
- d) 12.8%

34) What is...

- a) 50% of 280?
- b) 10% of 280?
- c) 25% of 280?
- d) 20% of 280?
- e) 1% of 280?