7th Grade Assignment – Week #21

Individual Work

- See how much you can do with **Percents Sheet #5.**
- Take the **Algebra Test** found at the end of this document.

Group Assignments:

Work on what is below on either Tuesday or Thursday, as needed and/or desired.

1) If desired, work on one or two of the "challenge" problems from the Algebra unit of the workbook, **Sheet #7** and **Sheet #8**. (See last week's assignment for these sheets.)

2) ***Puzzle!*** There are 200 people standing along a long, perfectly straight road. The first two people are 1 yard apart; the second and third are 2 yards apart; the third and fourth are 3 yards apart, and so on. How far is the last (200th) person from the first?

3) Missing-Digit Multiplication and Division
Fill in the missing digits (indicated by "?") for these problems.

a)
```
   ??
?)????
 -14
  2?
 -?1
   0
```

b)
```
    ??
5?)1???
  -?5?
   ???
  -400
     0
```

c)
```
   ??3
  x 2??
   ?1?7
   ?7?0
+ ?14?00
  ?25???
```

4) Puzzle! One number is 3 more than another. Four times the smaller number is 7 more than 3 times the greater. Find the two numbers.

Percents – Sheet #5

Do #1 to #6 in your head!

1) Convert to a percent.
   a) ¾
   b) $^{7}/_{10}$
   c) ⅓
   d) $^{3}/_{20}$
   e) $^{5}/_{6}$
   f) 0.53
   g) 0.06
   h) 0.045
   i) 1.16

2) Convert to a fraction.
   a) 40%
   b) 66⅔%
   c) 13%
   d) 37½%

3) Convert to a decimal.
   a) 53%
   b) 9%
   c) 90%
   d) 14.37%

4) What is…
   a) 10% of 52?
   b) 1% of 6000?
   c) 50% of 8?
   d) 100% of 83.48?
   e) 20% of 15?
   f) 1% of 463?
   g) 62½% of 2400?
   h) 83⅓% of 360?

5) a) 6 is what percent of 12?
   b) 4 is what percent of 12?
   c) 300 is what percent of 500?
   d) 7 is what percent of 700?
   e) 10 is what percent of 12?
   f) 60 is what percent of 90?
   g) 28 is what percent of 35?

6) Quickly Estimate.
   a) What is 52% of 238?
   b) What is 23% of 37?
   c) 52 is what percent of 160?
   d) $7.20 is what percent of $697?
   e) 68.4 is what percent of 71.8?

7) Calculate an exact answer.
   a) What is 28% of 58?
   b) What is 250% of $8900?
   c) 78 is what percent of 650?
   d) 2.94 is what percent of 840?
   e) 210 is 25% of what number?
   f) 210 is 60% of what number?

8) Increase/decrease problems.

a) What is 72000 decreased by 62½%?

b) What is 400 increased by 260%?

c) 600 to 800 is what percentage increase?

d) 800 to 600 is what percentage decrease?

e) Why weren't the above two answers the same?

9) Jane borrowed $500 from her neighbor at 8% simple interest. What does she owe, in total, after 3 years?

10) Janet borrowed $500 from a bank at 8% interest compounded annually. What does she owe, in total, after 3 years?

Mental Math

11) $53 \cdot 47 =$

12) $78 \cdot 82 =$

13) $61 \cdot 59 =$

14) $3.1 \div 5 =$

15) $53 \cdot 57 =$

16) $45 \cdot 22 =$

17) $210 \div 35 =$

18) $12 \cdot 99 =$

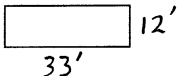
Review

19) 3.94 mg = _____g

20) 34.2 mℓ = _____ℓ

21) 80 c = _____gal

22) Give the four ways to express the ratio of this rectangle's dimensions.



Algebra Test

Simplify.

1) $-3 + 8$

2) $2 - 12$

3) $-4 - 11$

4) $-20 + 5$

5) $-6 - 7 + 30$

6) $(-2)(5)$

7) $(-7)(-5)$

8) $(18) \div (-9)$

9) $\frac{-24}{-3}$

10) $10 - -3$

11) $-3 + -6 - +9 - -4$

12) $7X + 4 - X$

13) $6X + 5$

14) $-4X - 3 - 3X + 8$

15) $8Y + 3X - 5 + X - 2$

Solving Equations

Be sure to show what is done to each side with each step.

16) $4X = 32$

17) $X + 10 = 2$

18) $X - 3 = 5$

19) $\frac{X}{5} = 10$

(Please Turn Over→)

Solve each equation. **Once again, be sure to show all of the steps.**

20) $6X + 3 = 2X - 9$

21) $5X - 3 + X = 6 + 14X - 11$

22) *Challenge!* (Do only if you have extra time.)

$-\frac{1}{5}X - \frac{3}{4} - \frac{2}{3}X = \frac{5}{6} - X - 3$