

6th Grade Assignment – Week #31

Individual Work:

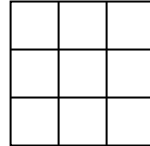
- Do as much as you can with Sheet #26, except for #28-33, which should be saved for your group work.

Group Assignments:

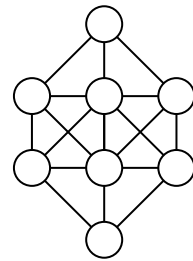
For Tuesday

- Together discuss **Problem #33 on Sheet #26.**
- **Big Square Root.** Together, find a way to calculate $\sqrt{717409}$
- **A 3x3 Magic Square**

Use the numbers 1 through 9 only once and fill in the grid shown on the right, so that each row, column and diagonal has the same sum.



- **Connected Circles.** Put the numbers 1 through 8 into the circles such that no two consecutive numbers are connected. For example, if we choose to put 3 into the top-most circle, then we cannot put 2 or 4 into any of the three circles just below it.
- **Two Number Puzzle.** Find two numbers whose product is 432 and sum is 62.



For Thursday

- Together do **Problems #28-32 on Sheet #26.**
- **Two Number Puzzle.** Find two numbers that add to 496 and subtract to 132.
- **Basketball Score.**
In a basketball game, the Tigers beat the Apes by 18 points. Twice the Tigers' score was 6 less than 3 times the Apes' score. What was the Tigers' score?

6th Grade Math – Sheet #26

Do it in your head.

- 1) $2.5 \cdot 3$
- 2) $0.16 \cdot 2$
- 3) 1.4^2
- 4) $1.3 \cdot 3$
- 5) 3^4
- 6) 5^3
- 7) $(0.2)^6$
- 8) $0.106 \cdot 0.105$
- 9) $80000 \div 50$
- 10) $724 - 487$
- 11) $3 \cdot 99$
- 12) $16 \cdot 99$
- 13) $234 \cdot 5$
- 14) $0.234 \div 0.05$
- 15) $\sqrt{40000}$
- 16) Convert to a percent.
 - a) $\frac{2}{3}$
 - b) $\frac{7}{8}$
 - c) $\frac{2}{5}$
 - d) $\frac{1}{6}$
- 17) Convert to a fraction.
 - a) 90%
 - b) 15%
 - c) 37.5%
- 18) Convert to a decimal.
 - a) $\frac{5}{11}$
 - b) 3.7%

Percents.

- 19) What is 42% of 600?
- 20) What is 12½% of 320?
- 21) 15 is what percent of 60?
- 22) 31 is what percent of 37? (Round your answer to three significant digits.)
- 23) How much do you have to pay for a \$48 jacket if there is 9% tax?

Ratios.

- 24) At a train station in Holland there are 975 bikes parked and 75 cars. What is the ratio of bikes to cars?

Rates.

- 25) Fran's hourly wage is \$12/hr and she works 32 hours per week. How long does it take her to earn \$2400?

Compound Fractions.

- 26) $\frac{3 - \frac{1}{4}}{\frac{5}{6} \cdot 2\frac{1}{2}}$
- 27) $\frac{2}{2 - \frac{2}{2 - \frac{1}{2}}}$

Foreign Exchange.

Review the *foreign exchange* example and problems from the previous worksheet.

The exchange rates for the British pound (£) at Bob's Bank (in Texas) are:

Buy \$1.52/£
Sell \$1.72/£

The rates for the U.S. dollar at Clara's Bank in England are:

Buy £0.608/\$
Sell £0.632/\$

28) Which bank do you think has better rates for its customers?

29) How many dollars do you get for £200 at Bob's Bank?

30) How many pounds do you need to give Clara's Bank in order to get \$400?

31) At each bank, what do you end up with if you change £150 into dollars, and then change that back into pounds? (Note: banks don't usually give coins in foreign currency.)

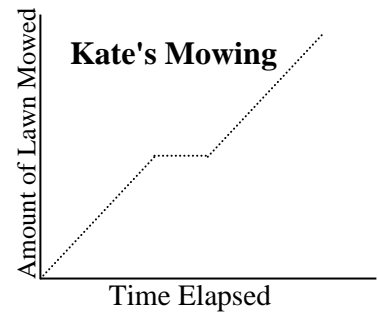
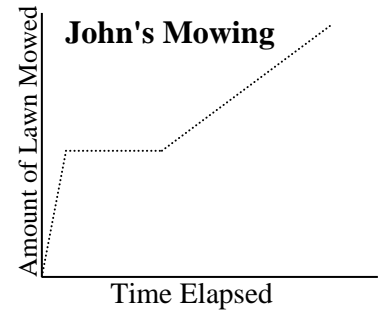
a) At Clara's Bank:

b) At Bob's Bank:

32) Now, which bank do you think has better rates?

Line Graphs.

33) The graphs below show the rates at which two people mowed a one-acre lawn.



Given that both Kate and John mowed their one-acre of lawn in the same amount of time, describe the differences that are shown in the above graphs.