Math 1 Reflection Sheet

Name: _____ Date: _____ Week #:_____

Assignments	Grade	Comments

Date	Class work	Homework (must write in planner as well)
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		

****Students must complete their homework daily, 100%; the consequence = silent lunch daily****

Parent Signature: _____

Essential Questions	Answers
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

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Homework postings: www.wmspatriots.weebly.com

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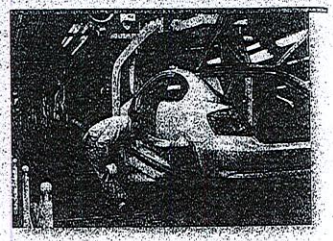
"Warm-up Q1W10"

Monday Warm-up In 2005, the population in a certain country was about 2.87×10^8. Spending for nursing home care was about \$5,745 per person. Approximately how much did that country spend on nursing home care in 2005? A. $\$1.65 \times 10^4$ B. $\$16.5 \times 10^{12}$ C .$\$1.65 \times 10^8$ D. $\$1.65 \times 10^{12}$	Show your work.
Tuesday Warm-up How many years does it take to earn 10^6 dollars if you were paid \$30 an hour and worked 35 hours a week for 50 weeks a year? A. 18 – 19 years B. 19 – 20 years C. 20 – 21 years D. 22 – 23 years	Show your work.
Wednesday Warm-up Mrs. Jones gave her students a scavenger hunt map to find buried treasures. The students had to travel from point R(-13, -2) to point S(2,-2) to point T (2,6) and back to point R. What is the total distance traveled?	Show your work.
Thursday Warm-up The human ear grows at about 8.78×10^{-3} inches a year. How much larger does the human ear grow in a month than a day? A. 100 times B. 87 times C. 30.4 times D. 0.033 times	Show your work.

On Your Own

Applications



① The following table gives average hourly compensation costs for production workers from 24 countries. Hourly compensation costs include hourly salary, vacation, holidays, benefits, and other costs to the employer.

Average Hourly Compensation Costs for Production Workers
(in U.S. dollars for selected countries, 2004)

Country	Cost	Country	Cost	Country	Cost	Country	Cost
Australia	23.09	Finland	30.67	Japan	21.90	Spain	17.10
Austria	28.29	France	23.89	Mexico	2.50	Sweden	28.42
Belgium	29.98	Germany	32.53	Netherlands	30.76	Switzerland	30.26
Brazil	3.03	Hong Kong	5.51	New Zealand	12.89	Taiwan	5.97
Canada	21.42	Ireland	21.94	Norway	34.64	United Kingdom	24.71
Denmark	33.75	Italy	20.48	Singapore	7.45	United States	23.17

Source: U.S. Bureau of Labor Statistics, www.bls.gov/news.release/ichcc.t02.htm

a. What is the average yearly compensation cost for a Japanese worker who gets paid for a 40-hour week, 52 weeks a year?

b. Make a dot plot of the costs. Describe how U.S. average hourly compensation costs compare to those of the other countries.

c. Make a histogram of the average hourly compensation costs. Write a summary of the information conveyed by the histogram.

Review

⑳ Given that $4.2 \cdot 5.5 = 23.1$, use mental computation to evaluate each of the following.

a. $-4.2 \cdot 5.5$ **b.** $-4.2(-5.5)$ **c.** $\frac{23.1}{-5.5}$

d. $4.2(-55)$ **e.** $\frac{-23.1}{2.1}$

㉓ The **relative frequency table** below shows (roughly) the distribution of the proportion of U.S. households that own various numbers of televisions.

Household Televisions

Number of Televisions, x	Proportion of Households, p
1	0.2
2	0.3
3	0.3
4	0.1
5	0.1

a. What is the median of this distribution?

b. To compute the mean of this distribution, first imagine that there are only 10 households in the United States. Convert the relative frequency table to a frequency table and compute the mean.

c. Now imagine that there are only 20 households in the United States. Convert the relative frequency table to a frequency table and compute the mean.

d. Use the following formula to compute the mean directly from the relative frequency table.

$$\bar{x} = x_1 \cdot p_1 + x_2 \cdot p_2 + x_3 \cdot p_3 + \cdots + x_k \cdot p_k \text{ or } \bar{x} = \Sigma x_i \cdot p_i$$

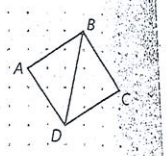
e. Explain why this formula works.

㉔ Suppose your grade is based 50% on tests, 30% on homework, and 20% on the final exam. So far in the class you have 82% on the tests and 90% on homework.

a. Compute your overall percentage (called a **weighted mean**) if you get 65% on the final exam. If you get 100% on the final exam.

b. Your teacher wants to use a spreadsheet to calculate weighted means for the students in your class in order to assign grades. She uses column A for names, column B for test score, column C for homework percentage, column D for final exam, and column E for the weighted mean. Give the function she would use to calculate the values in column E.

㉘ Consider the square shown at the right.



a. Find the area of square $ABCD$.

b. Find the length of $\overline{BD}$.

c. Find the area of $\triangle BDC$.

㉙ Evaluate each expression when $x = 3$.

a. 2^x **b.** $5 \cdot 2^x$ **c.** $(5 \cdot 2)^x$

d. $(-x)^2$ **e.** $(-2)^{x+1}$ **f.** -2^{x+1}

29 The number 20,000 can be written as $2(10{,}000) = 2 \cdot 10^4$ and 2,000,000 can be written as $2(1{,}000{,}000) = 2 \cdot 10^6$.

a. On your calculator when you multiply 20,000 by 2,000,000 you get "4E10." What does this mean?

b. Predict what you will get when you use your calculator to multiply 2,000,000 by 4,000,000.

c. Predict what you will get when you use your calculator to multiply 2,400,000 by 20,000. What rule does the calculator appear to be using to format the answer?

Applications

1 The table below gives the percentiles of recent SAT mathematics scores for national college-bound seniors. The highest possible score is 800 and the lowest possible score is 200. Only scores that are multiples of 50 are shown in the table, but all multiples of 10 from 200 to 800 are possible.

College-Bound Seniors

SAT Math Score	Percentile	SAT Math Score	Percentile
750	98	450	28
700	93	400	15
650	85	350	7
600	74	300	3
550	60	250	1
500	43	200	0

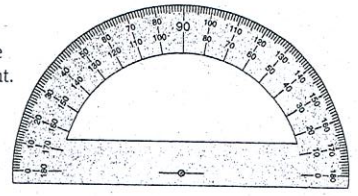
Source: *2005 College-Bound Seniors Total Group Profile Report*, The College Board

a. What percentage of seniors get a score of 650 or lower on the mathematics section of the SAT?

b. What is the lowest score a senior could get on the mathematics section of the SAT and still be in the top 40% of those who take the test?

c. Estimate the score a senior would have to get to be in the top half of the students who take this test.

d. Estimate the 25th and 75th percentiles. Use these quartiles in a sentence that describes the distribution.



31 Using a protractor, draw and label each angle. If you do not have a protractor, place a sheet of paper over the protractor to the right.

a. $m\angle BAC = 90°$ b. $m\angle FDE = 30°$ c. $m\angle PQR = 120°$

d. $m\angle XZY = 65°$ e. $m\angle STV = 180°$

32 Find results for each of these calculations.

a. $12 - (-8)$ b. $-3 - 7$ c. $-3 - (-7)$

d. $8 - 12$ e. $-8 + (-12)$ f. $2.5 - (-1.3)$

33 An amusement park reports an increase of 21 bungee customers from Saturday to Sunday. If this represents an increase of 7% in the number of customers:

a. What would a 1% increase be?

b. What would a 10% increase be?

c. What would a 5.1% increase be?

d. What was the original number of customers?

e. What is 5.1% of your answer for Part d?

f. What is 7% of your answer for Part d?

35 Express each of these fractions in equivalent simplest form.

a. $\frac{-12}{-30}$ b. $\frac{20}{-12}$ c. $\frac{5-8}{9-5}$

d. $\frac{-5-8}{-5-(-8)}$ e. $\frac{78-6}{9-(-18)}$ f. $\frac{5-7}{10+14}$

60 If 10% of a number is 20, use mental computation to find the following.

a. 30% of the number b. 150% of the number

c. One half of the number d. 35% of the number