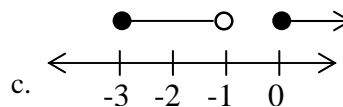


Algebra I Homework Week Of November 5 – 9

Monday, November 5, 2007

- Peter received a score of 80% on his test. There were 50 questions on the test (each question being worth the same amount of credit.) How many questions did Peter answer correctly?
- A winter coat costs \$420 and sales tax in your area is 8.25%. Find the total cost of buying the winter coat.
- A car wash hired employees whose ages are given as follows: 27, 19, 18, 27, 17, 56, 29, 27. Determine the mean, median, and mode.
- Payless is selling shoes on sale from \$18 marked down to \$12. What is the percent of change?
 - When the sale is over, Payless is marking the shoes from \$12 to \$18. What is the percent of change?
- The larger of two numbers is seven less than twice the smaller. If four times the larger was decreased by two, the result is ten more than four times the larger. What are the numbers?
- $\frac{3}{5}$ of 30 is what **percent** of $\frac{1}{3}$ of 60?
- Write the following numbers in set notation:
 - $-3 < x \leq 7$
 - $\{x \mid x < 2 \text{ or } x \geq 4\}$



Tuesday, November 6 → No School – Election Day

Wednesday, November 7

- McDonalds decided to pay its employees \$6.50 an hour instead of \$6 an hour. What was the percent of change? Was it an increase or decrease?
- Mike was measuring a side of a cube and accidentally measured a length of 5 cm instead of 6 cm. What is the relative error when finding the volume of the cube?
- A measurement is taken with a metric ruler with a precision of 0.1 cm. The measurement is 3.4 cm. What is the tolerance interval for this measurement?
- A ruler has a precision of 0.1 cm. A rectangle is measured to be 19.4 cm by 11.2 cm.
 - What is the relative error, expressed as a decimal, in calculating the area?
 - What is the percent error, to the *nearest tenth* of a percent, in calculating the area?
- Find three consecutive integers such that twice the sum of the second and third results in two less than the product of five and the first.
- Perform the indicated operations and simplify:
 - $\frac{(3x^2)(4x^6)}{6x^3}$
 - $\frac{6x^{-3}y^{-6}}{18x^4y^{-7}}$
 - $(3x^4)^2$
 - $\frac{\sqrt{10}}{2\sqrt{6}}$
 - $(3\sqrt{5})(8\sqrt{10})$
 - $\frac{10\sqrt{80}}{5\sqrt{2}}$

Thursday, November 8 – Quiz today on word problems, percent, error

Note: Friday, November 9 Homework on Back of this sheet

Friday, November 9

1. Factor each of the following using the greatest common factor:

a) $12x^2 - 30x^3$

b) $2x^5 - 6x^2$

c) $24x^2 + 36y^2$

d) $15x^7 - 12x^4 + 18x^3$

e) $4a^4b^6 - 6a^3b^2 + 2a^2b$

2. If $3x$ is one factor of $3x^2 - 9x$, what is the other factor? (This is a multiple choice question)

a) $x + 3$

b) $x^2 - 6x$

c) $x - 3$

d) $3x$

3. Solve each of the following for x :

a) $2x + 4 = 3x - 6$

b) $3(3x - 10) = 5(6 + x)$

c) $ax + by = c$

4. Simplify each term:

a) $(3x^2)(8x^6)$

b) $\frac{35x^7}{5x^3}$

c) $6x^0 - (4x)^0$

d) $\frac{24x^3 - 12x^2 + 6x}{6x}$

5. A real estate company pays commissions to their sales people for selling property. A well known company paid 6% commissions last year to their sales staff, totaling \$480,000. What was the dollar value of the real estate sold by the company that year?

6. Joshua's normal body temperature is 98.5°F . Due to a cold, his temperature went up 3°F . To the nearest percent, what was the percent of increase in his body temperature?