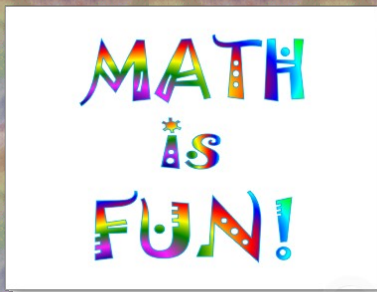


06/07/2016



Test Review

How do I choose and interpret units consistently in formulas?

Today's CCGPS Standards



MCC9-12.A.SSE.1 Interpret expressions that represent a quantity in terms of its context.

MCC9-12.A.SSE.1a Interpret parts of an expression, such as terms, factors, and coefficients.

MCC9-12.N.Q.1 Use units as a way to understand problems and guide the solution of multi-step problems; choose and interpret the scale and the origin in graphs and data displays.

MCC9-12.N.Q.2 Define appropriate quantities for the purpose of descriptive modeling.

MCC9-12.N.Q.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

August 24, 2015

Warm-up

1. $2x^3 + 5x - 7$

1. Terms $2x^3, 5x, -7$ Factors $2, x^3, 5, x$ Coefficients $5, 2$ Constants -7

2. $6\pi r^2 - 5\pi$

2. Terms $6\pi r^2, -5\pi$ Factors $6, \pi, r^2, -5, \pi$ Coefficients 6π Constants -5π

For problems 1 and 2, match the terms, coefficients, constants, and factors of the given expressions.

1. $x^3 + 25x - 8$

1. Terms $x^3, 25x, -8$

Factors $25, x$

Coefficients $1, 25$

Constants -8

2. $2\pi rh + 10\pi$

2. Terms $2\pi rh, 10\pi$

Factors $2, \pi, r, h$ and $10, \pi$

Coefficients 2π

Constants 10π

For problem 3, translate each verbal expression to an algebraic expression. Then, identify the terms, coefficients, and constants of the given expressions.

3. The sum of a number squared and twice the number.

Alg. Expression $x^2 + 2x$

Terms $x^2, 2x$

Coefficients 1, 2

Constants none

For problems 4-6, translate each verbal expression to an algebraic expression.

4. At Sam's you can buy 10 bags of meatballs at a 25% discount

with a \$35 membership

4. $10x - .25(10x) + 35$

5. A number cubed increased by twice the number.

5. $x^3 + 2x$

6. The difference between five times a number squared and eight.

6. $5x^2 - 8$

Use Dimensional Analysis to solve the following problems. Show all work for credit!!

7. Johnny bowls with a 16-pound ball. How many grams is that.

$$\frac{16 \cancel{\text{lb}}}{1 \cancel{\text{lb}}} \times \frac{454 \text{ g}}{1 \text{ lb}} = 7264 \text{ g}$$

8. Lucy walks Point South Golf Club, which is 6700 yards. How many miles is that?

$$\frac{6700 \text{ yd}}{1760 \text{ yd}} \times \frac{1 \text{ mi}}{1} = 3.81 \text{ mi.}$$

9. Rory hits a driver 330 yards in golf. The distance around the Earth is 24000 miles. How many shots would Rory need to go around it.

$$\frac{24000 \text{ mi}}{1 \text{ mi}} \times \frac{1760 \text{ yd}}{1 \text{ mi}} \times \frac{1 \text{ shot}}{330 \text{ yd}} = 128,000 \text{ shots}$$

10. Summer's basketball court took 6 tons of cement.

How many kilograms of cement is that?

10. 5454.54 kg

6 tons	2000 lbs	1 kg
	1 ton	2.2 lbs

11. How many pints of milk make a kiloliter?

11. 2114.16 pints

1 kL	1000 L	1 pint
	1 kL	.473 L

12. 3 ounces of powder makes a quart of protein drink,
so how many grams make a liter?

12. 90.06 g/L

3 oz	28.4 g	1 qt
1 qt	1 oz	.946 L

13. You spend 10 minutes a day brushing your teeth (I hope).

How many days in a 80-year lifetime are spent brushing? (Oh, and floss too)

13. 20278 days/lifetime

$$\frac{10 \cancel{\text{min}}}{1 \cancel{\text{day}}} \times \frac{1 \cancel{\text{hr}}}{60 \cancel{\text{min}}} \times \frac{1 \cancel{\text{day}}}{24 \cancel{\text{hr}}} \times \frac{365 \text{ days}}{1 \cancel{\text{yr}}} \times \frac{80 \cancel{\text{yrs}}}{\text{lifetime}} = 20278 \text{ days/lifetime}$$

14. A picture frame cutter processes a frame in 2 minutes. The company makes \$17 for each frame. How much money is he producing per hour? \$510/hr

Per week? (40 hrs/week)

wk \$20,400 a week

$$\frac{1 \cancel{\text{frame}}}{2 \cancel{\text{min}}} \times \frac{\$17}{1 \cancel{\text{frame}}} \times \frac{60 \cancel{\text{min}}}{1 \text{ hr}} = \$510/\text{hr}$$

$$\frac{\$510}{1 \cancel{\text{hr}}} \times \frac{40 \cancel{\text{hr}}}{1 \text{ week}} = \$20,400 \text{ a week}$$

15. Betty, Veronica and Jughead argue who eats Burgers the fastest.
Who wins the comparison in the table below.

15. Betty wins

Amount of Burgers	Speed
Betty 10 oz	4 minutes
Veronica 6 oz	155 seconds
Jughead 1 kilogram	15 minutes

$$\text{Betty } \frac{10 \text{ oz}}{4 \text{ min}} = 2.5 \text{ oz/min} \quad \text{Veronica } \frac{6 \text{ oz}}{155 \text{ sec}} \times \frac{60 \text{ sec}}{1 \text{ min}} = 2.32 \text{ oz/min}$$

$$\text{Jughead } \frac{1 \text{ kg}}{15 \text{ min}} \times \frac{2.2 \text{ lb}}{1 \text{ kg}} \times \frac{16 \text{ oz}}{1 \text{ lb}} = 2.35 \text{ oz/min}$$

Homework



Study for TEST!

