

Math Skills Baseline

This will not count toward your grade in any way, but it will give you an idea of the level of math skills required in this course. I will post a solution after Friday. If you have any questions, stop by to see me or visit www.SOSMath.com. With this in mind, please answer the following questions:

1. What is $\frac{1}{2x-y} - \frac{1}{x+y}$ if $x=2$ and $y=3$?

2. What is $\frac{5(2-x)}{2(x+y)}$ if $x=-3$ and $y=5$?

3. Find x if $5x - 8 = 12$.

4. Find y if $\frac{3}{y-1} = \frac{5}{y+1}$.

5. Express the following numbers in scientific notation (e.g. $501 = 5.01 \times 10^2$):

a. 72.6

c. 0.071

e. $1/3$

b. 1,876,572

d. $1/4$

f. 0.00015

6. Express the following in decimal notation:

a. 5×10^{-3}

c. 8.1×10^6

e. -2×10^2

b. 3.14×10^0

d. 1.9×10^{-3}

f. 0.25×10^3

7. Evaluate the following:

a. 5×10^{-3}

c. 3^4

e. 1^5

b. $(64)^{1/2}$

d. 0.1^2

f. $\sqrt[3]{125}$

8. Solve $F = G \frac{m_1 m_2}{R^2}$ for R.

9. If there are 5,280 feet in a mile and 3,600 seconds in an hour, convert

a. 60 miles per hour to feet per second

b. 40 feet per second to miles per hour

10. Perform the following operations and express the results with the proper number of significant digits:

$$1.25639 + 2.1 = ?$$

$$5.3 \times 4 = ?$$

11. Calculators aren't always doing what you think they're doing. Try these and if you get different answers see if you can figure out why:

enter: $5*6/2\pi$ = _____

then try: $5*6/(2\pi)$ = _____

then: $5*6/(2*\pi)$ = _____

Thank you for your effort.