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Monday, September 17, 2012
10:54 AM

Warm-Up: Rational vs. Irrational?
 ✓ fraction
 * repeats

* never ends
 * never repeats
 * pattern

$$\begin{array}{r} -5 \\ 1 \\ 0 \\ \frac{2}{3} \\ -\frac{8}{11} \end{array}$$

$$\begin{array}{l} 16\% \\ .318 \\ .66\bar{6} \\ .1212\bar{12} \\ \sqrt{16} \Rightarrow 4 \end{array}$$

$$\pi, \sqrt{3}, .1121231234$$

↑ not perfect ↑ pattern

Evaluating Expressions

expression: doesn't have an =

$$2x+1, m-5$$

equation: have =, solve it

$$a+b=2, 4n+2=5$$

coefficient: # in front of a variable

$$4n+7$$

↖ coefficient

$$x-2$$

↑ coefficient is 1

$$-n^2+3$$

↑ coefficient is -1

evaluate: substitute (plug-in) a # for a variable.

Exs:

* Follow order of operations (PEMDAS)

① $50-3x$ when $x=7$

$$50 - 3(7)$$

$$50 - 21$$

$$\boxed{29}$$

② $2x^2 - 5x + 4$ when $x = -7$

$$2(-7)^2 - 5(-7) + 4$$

$$\downarrow$$

$$(-7)(-7)$$

$$2(49) + 35 + 4$$

$$98 + 35 + 4$$

$$\boxed{137}$$

③ $2x^2 - 5x + 4$ when $x = 1.2$

$$2(1.2)^2 - 5(1.2) + 4$$

$$\downarrow$$

$$2(1.44) - 6 + 4$$

$$2.88 - 6 + 4$$

$$\boxed{0.88}$$

④ $\frac{2a}{5} + (n-1)d$ when $a = -4$, $n = 10$, $d = 3$

$$\frac{2(-4)}{5} + (10-1)3$$

$$\frac{-8}{5} + 9(3)$$

$$\frac{-8}{5} + 27 \Rightarrow \frac{127}{5} \approx 25.4$$