What is the difference between these two terms?

Equation   Expression

Must have an   Has no = sign
= sign

Write an expression that models each statement exactly as written.

1. Five less than a number. $A - 5$

2. The product of a number and six. $B \cdot 6$

3. The sum of twelve and a number. $12 + X$

4. The difference of a number and three. $Q - 3$

5. Eight times the quantity one plus a number. $8(1 + Q)$

Model each statement.

1. The boat can carry up to 8 passengers. $b \leq 8$

2. You need at least a 93 on the quiz to get an A. $G \geq 93$

3. The wheelbarrow can hold no more than 15 bricks. $w \leq 15$

4. The Federal minimum wage is $7.25 per hour. $M \geq 7.25$

What is this called? $5c^4 - 8c^3 + 1.3c^2 - 118$

A variable expression

How many terms are in this expression? 4

What is a term?
a number, a variable, or the product of a number and one or more variables.
Terms in a variable expression are separated by Addition and Subtraction.

What is a coefficient? The # being multiplied by a variable. Usually found in front of the variable.

Simplify. $6w^2 - 4 + 5w - 3 + w^2 - 8w$

3

Like Terms: Terms with the same variable(s) with the same exponent(s)

You combine like terms by adding and subtracting using the coefficients.

1

$6w^2 + w^2 \qquad -4 - 3 \quad + 5w - 8w$

2

$\boxed{7w^2 - 3w \ -7}$ Standard Form

Simplify:

$-6a^2b + ab^2 - 4b^2a + 7ab - 2a^2b - 5ab^2$

$\underline{-6a^2b - 2a^2b} \qquad \underline{+ab^2 - 4b^2a - 5ab^2} \qquad + 7ab$

$-8a^2b \qquad\qquad -8ab^2 \qquad\qquad\qquad + 7ab$

$= -8a^2b - 8ab^2 + 7ab$

Simplify. $\dfrac{7}{3}(w+y) - \dfrac{1}{3}(w+y)$

$= \dfrac{7}{3}w + \dfrac{7}{3}y - \dfrac{1}{3}w - \dfrac{1}{3}y$

$= \dfrac{6}{3}w + \dfrac{6}{3}y$

$= \boxed{2w + 2y}$

Write an expression for the perimeter of this figure.

2a

2b

a-1

a +3b

a + b

3a + 4

0.5a

4b- a
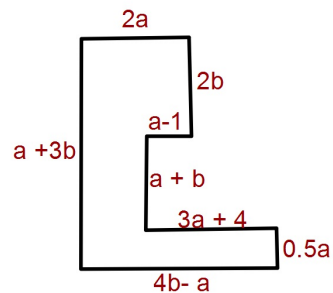
$$
\begin{array}{r}
2a \\
+ \quad 4b- a \\
+ \quad a +3b \\
+ \quad 0.5a \\
+ \quad 3a + 4 \\
+ \quad a + b \\
+ \quad a-1 \\
+ \quad 2b \\
\hline
7.5a + 10b + 3
\end{array}
$$

You evaluate a variable expression by

Substituting values for each variable
Then simplify the expression

Evaluate this expression for   C = 8   and D = -12

1. $D^2 - 7CD$

$$= (-12)^2 - 7(8)(-12)$$

$$= 144 + 672 = 816$$

You can now finish Hwk #3   Sec 1-2

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Problems 3, 4, 8, 9, 12, 36, 44, 45, 50, 53