

Unit 1 Review Examples

Conversions



Convert 50 centimeters to decameters $1000 \text{ cm} = 1 \text{ Dm}$

$$50 \text{ cm} \quad 0.050 \text{ decameters}$$

Convert 250 inches per sec to miles per hour

$$\frac{250 \text{ in}}{1 \text{ sec}} * \frac{1 \text{ ft}}{12 \text{ in}} * \frac{1 \text{ mile}}{5280 \text{ ft}} * \frac{60 \text{ sec}}{1 \text{ min}} * \frac{60 \text{ min}}{1 \text{ hr}} = \frac{900,000}{43360} = 14.2 \text{ mph}$$

If have 1000 milliliters and need 2 Liters for a science experiment, will you have enough?

$$1000 \text{ mL}$$

$$1000 \text{ mL} = 1 \text{ L}$$

Polynomials

1 L, NO.

Simplify the polynomial. Classify by degree and term, then list the coefficients and constants.

$$(5 + 6b^2 + b^3) - (6b^3 + 3 + 4b^2)$$

$$5 + \underline{6b^2} + \underline{b^3} - \underline{6b^3} - 3 - \underline{4b^2}$$

$$\boxed{-5b^3 + 2b^2 + 2}$$

Degree: 3 cubic

Term: 3 tri

Coefficients: -5, 2

Constant: 2

Find the perimeter and the area of a rectangle with a length of $(5x - 2)$ and a width $(2x + 3)$.

Perimeter:

$$\begin{array}{ccc} & 5x-2 & \\ \text{---} & & \text{---} \\ 2x+3 & & 2x+3 \\ & 5x-2 & \end{array} \quad P = 2(5x - 2) + 2(2x + 3) \quad P = 14x + 2$$

Area:

$$L \times W \rightarrow (5x - 2)(2x + 3)$$

$$10x^2 + \underline{15x} - \underline{4x} - 6$$

$$\boxed{10x^2 + 11x - 6}$$