SIGNIFICANT DIGITS - used with measurements

2.378 m * 5.42 m = 12.88876 m^2

1) All nonzero digits are significant.

2) Zeros between 2 sig. digits are significant

3) Zeros at the end of a decimal fraction are significant.

4) Mult./Div = Round to the Smallest # of Sig. digits in the original measurements

360,000 m — 2

0.000793 in. — 3

50.040 in. — 4

0.00730 cm — 3

860.03 ft — 5

7000.0 m — 5

7.2 ft * 3.65 ft = 26.28 ft^2

(2) 3 → ≈26 ft^2

5/ Add & Subtr. = Use the smallest # of decimal places in the original measurements.

$$\begin{array}{r} 7.2 \text{ ft} \\ +\ 3.65 \text{ ft} \\ \hline 10.85 \text{ ft.} \end{array}$$

1 decimal place
2 decimal

10.9 ft.

Unit Conversion

Convert. $\frac{\text{mi}}{\text{hr}}$

$5280\ \text{ft} = 1\ \text{mi}$

$$240\ \frac{\text{ft}}{\text{sec}} \cdot \frac{1\ \text{mi}}{5280\ \text{ft}} \cdot \frac{3600\ \text{sec}}{1\ \text{hr}} = \frac{864{,}000}{5280} = \frac{1800}{11}\ \frac{\text{mi}}{\text{hr}} \approx 163.636\ \frac{\text{mi}}{\text{hr}}$$

$540\ \frac{\text{m}}{\text{min}}$ to $\frac{\text{cm}}{\text{sec}}$

$$\frac{540}{1}\ \frac{\text{m}}{\text{min}} \cdot \frac{1\ \text{min}}{60\ \text{sec}} \cdot \frac{100\ \text{cm}}{1\ \text{m}} = \frac{54000}{60} = 900\ \frac{\text{cm}}{\text{sec}}$$