

# Converting Rates

Name \_\_\_\_\_

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1) Convert 110km/h into miles per hour.

$$\frac{110 \text{ km}}{1 \text{ hr}} \times \frac{1 \text{ mi}}{1.609 \text{ km}} = \boxed{68.4 \frac{\text{mi}}{\text{h}}}$$

2) Convert 55mi/h into km/h.

$$\frac{55 \text{ mi}}{1 \text{ h}} \times \frac{1.609 \text{ km}}{1 \text{ mi}} = \boxed{88.5 \frac{\text{km}}{\text{h}}}$$

3) Convert 50km/h into metres per second

$$\frac{50 \text{ km}}{1 \text{ hr}} \times \frac{1000 \text{ m}}{1 \text{ km}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{1 \text{ min}}{60 \text{ sec}} = \boxed{13.9 \text{ m/s}}$$

4) Convert 100mi/h into feet per second

$$\frac{100 \text{ mi}}{1 \text{ hr}} \times \frac{5280 \text{ ft}}{1 \text{ mi}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{1 \text{ min}}{60 \text{ sec}} = \boxed{146.7 \frac{\text{ft}}{\text{s}}}$$

5) Convert \$7.49 per foot into cost per metre.

$$\frac{7.49}{1 \text{ ft}} \times \frac{1 \text{ ft}}{3.048 \text{ m}} = \boxed{\$24.57/\text{m}}$$

6) Convert \$17.89 per metre into cost per yard.

$$\frac{17.89}{1 \text{ m}} \times \frac{1 \text{ m}}{1.094 \text{ yd}} = \boxed{\$16.36/\text{yards}}$$

7) Convert \$7 000 000 per mile into cost per metre.

$$\frac{7000000}{1 \text{ mile}} \times \frac{1 \text{ mile}}{1.609 \text{ km}} \times \frac{1 \text{ km}}{1000 \text{ m}} = \boxed{\$4350.53/\text{metre}}$$

8) Convert \$3.50 per square foot into cost per square yard.

$$\frac{\$3.50}{1 \text{ ft}^2} \times \frac{1 \text{ ft}^2}{12^2 \text{ yd}^2} = \boxed{\$3.5/\text{yd}^2}$$

9) Convert \$9.89 per square metre into cost per square foot.

$$\frac{\$9.89}{\text{m}^2} \times \frac{1 \text{ m}^2}{10.764 \text{ ft}^2} = \boxed{\$0.92/\text{sq ft}}$$

10) Convert \$10.60 per cubic inch into cost per cubic cm.

$$\frac{\$10.60}{\text{in}^3} \times \frac{1 \text{ in}^3}{2.54^3 \text{ cm}^3} = \boxed{\$0.65/\text{cm}^3}$$

11) Convert \$37 500 000 per cubic mile into cost per cubic metre.

$$\frac{37500000}{\text{mi}^3} \times \frac{1 \text{ mi}^3}{1609^3 \text{ m}^3} = \boxed{\$0.09/\text{m}^3}$$

12) Convert \$0.01 per cubic inch into cost per cubic mile.

$$\frac{\$0.01}{\text{in}^3} \times \frac{12^3 \text{ in}^3}{1 \text{ ft}^3} \times \frac{5280^3 \text{ ft}^3}{1 \text{ mi}^3}$$

$$\frac{37500000}{\text{mi}^3} \times \frac{1 \text{ mi}^3}{1609^3 \text{ km}^3} \times \frac{1 \text{ km}}{1000 \text{ m}}$$

$$\boxed{0.54 \times 10^{12} \text{ or } \$2,540,000,000,000/\text{cubic mile}}$$