

8. Your car weighs 3,000lbs. or 1.5 short tons. How many grams does your car weigh?

$$1.5 \text{ short tons} \left( \frac{907.2 \text{ kg}}{1 \text{ short ton}} \right) \left( \frac{1000 \text{ g}}{1 \text{ kg}} \right) = \frac{(1.5 \times 907.2 \times 1000)}{(1 \times 1)}$$

$$\frac{1360800}{1} = 1360800 \text{ g}$$

not given

9. You pull into a parking garage and see a sign that says the height limit is 3 meters. Your car is 6 ft 3 in tall. How close, in centimeters, is the ceiling to your car?

$$6 \text{ ft} \left( \frac{12 \text{ in}}{1 \text{ ft}} \right) = 72 \text{ in} + 3 \text{ in} = 75 \text{ in} \left( \frac{2.54 \text{ cm}}{1 \text{ in}} \right)$$

↑  
not given

$$3 \text{ meters} \left( \frac{100 \text{ cm}}{1 \text{ meter}} \right) = 300 \text{ cm}$$

height of garage  
↑  
not given

$$6.25 \text{ ft} \left( \frac{1 \text{ m}}{3.28 \text{ ft}} \right) \left( \frac{100 \text{ cm}}{1 \text{ m}} \right)$$

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10. You find a parking space that is 300 centimeters wide. Your car is 8 feet wide. Is the parking space wide enough for your car? If so, how much room (in centimeters) will you have on each side of your car?

$$8 \text{ feet} \left( \frac{1 \text{ meter}}{3.28 \text{ feet}} \right) \left( \frac{100 \text{ cm}}{1 \text{ meter}} \right)$$

↑  
not given

$$\frac{(6.25 \times 1 \times 100)}{(3.28 \times 1)} = \frac{625}{3.28} = 190.5 \text{ cm}$$

↑  
not given

$$\frac{(8 \times 1 \times 100)}{(3.28 \times 1)} = \frac{800}{3.28} =$$

243.9 cm

$$\begin{array}{r} 300.0 \text{ cm} \\ - 190.5 \text{ cm} \\ \hline 109.5 \text{ cm} \end{array}$$

clearance

$$\begin{array}{r} 300.0 \\ - 243.9 \\ \hline 56.1 \end{array}$$

$$\frac{56.1}{2} =$$

