## Convert Between Customary and Metric

| EASY ballpark figures: | Good to remember also: | Exact science: <br> 1 yard $=0.9144 \mathrm{~m}$ |
| :--- | :--- | :--- |
| $1 \mathrm{~m} \approx \ldots \quad$ yd | $1 \mathrm{in} \approx 2.5 \mathrm{~cm}$ | 1 foot $=0.3048 \mathrm{~m}$ |
| $1 \mathrm{~L} \approx \ldots$ qt | $1 \mathrm{mi} \approx 1.6 \mathrm{~km}$ | 1 quart $=0.946 \mathrm{~L}$ |
| $1 \mathrm{~kg} \approx \ldots \quad \mathrm{lb}$ | $(4$ laps on a $400-\mathrm{m}$ track $)$ | 1 inch $=2.54 \mathrm{~cm}$ |
| $1 \mathrm{ounce}=28.35 \mathrm{~g}$ |  |  |

1. Find the measurements that are CLOSE to each other.

| a. 1 inch | $\begin{aligned} & 1 \mathrm{~cm} \\ & 2.5 \mathrm{~cm} \\ & 5 \mathrm{~cm} \end{aligned}$ | b. 1 foot | 5 cm <br> 10 cm <br> 30 cm | c. 1 mile | 1.5 km <br> 2.5 km <br> 3.5 km | d. 1 qt | 1 L 100 mL 2.5 L |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| e. 2 kg | $\begin{aligned} & 2 \mathrm{lb} \\ & 4 \mathrm{lb} \\ & 6 \mathrm{lb} \end{aligned}$ | f. 1 m | $\begin{aligned} & 12 \mathrm{in} \\ & 3 \mathrm{ft} \\ & 3 \mathrm{yd} \end{aligned}$ | g. 1 cup | 5 mL 30 mL 240 mL | h. 1 gal | $\begin{aligned} & 4 \mathrm{~L} \\ & 6 \mathrm{~L} \\ & 8 \mathrm{~L} \end{aligned}$ |

2. Which is more?
a. 1 cm
1 in
b. $1 \mathrm{~L} \quad 1 \mathrm{qt}$
c. 1 kg
1 lb
d. $1 \mathrm{~g} \quad 1 \mathrm{oz}$
e. 4 in 20 cm
f. $5 \mathrm{~kg} \quad 20 \mathrm{lb}$
g. 3 gal
2 L
h. $7 \mathrm{~m} \quad 4 \mathrm{ft}$
3. Convert between the units. Use a calculator when needed.

| a. <br> $1 \mathrm{~cm}=$ $\qquad$ in | b. $1 \mathrm{~m}=$ $\qquad$ yd | c. $1 \mathrm{~L}=$ $\qquad$ qt | d. <br> $1 \mathrm{~kg}=$ $\qquad$ lb |
| :---: | :---: | :---: | :---: |
| $25 \mathrm{~cm}=$ $\qquad$ in | $5.4 \mathrm{~m}=\ldots \mathrm{ft}$ | $4.6 \mathrm{~L}=\ldots \ldots \mathrm{qt}$ | $0.568 \mathrm{~kg}=\ldots \mathrm{lb}$ |
| $5 \mathrm{in}=\ldots \mathrm{cm}$ | $30 \mathrm{ft}=\ldots \mathrm{m}$ | $1 \mathrm{gal}=\square \mathrm{L}$ | $75 \mathrm{lb}=\ldots \mathrm{kg}$ |
| $10 \mathrm{in} \mathrm{=} \quad \mathrm{~cm}$ | $22 \mathrm{ft}=\ldots \mathrm{m}$ | $31 / 2 \mathrm{qt}=\ldots \mathrm{L}$ | $8.5 \mathrm{lb}=\ldots \ldots \mathrm{kg}$ |

4. In the U.S., a common speed limit is 55 miles per hour. Does this correspond (approximately) to a European speed limit of a) $40 \mathrm{~km} / \mathrm{h} \quad$ b) $60 \mathrm{~km} / \mathrm{h} \quad$ c) $80 \mathrm{~km} / \mathrm{h}$ ?
5. A typical student ruler is 12 inches long. How long would it be in centimeters?
6. On the bottom of a food container you can often read its capacity. One container said 64 oz . Is it bigger than one that is 2.2 L ? If so, how much larger? If not, how much smaller?
7. Angela weighs 56 kg , Theresa weighs 128 lb , Judie weighs 137 lb , and Elizabeth weighs 60 kg . Write the girls in order from the lightest to the heaviest.
8. 1 marathon is 26.21875 miles. How long is a half-marathon in kilometers?
