

Converting between Metric and Imperial Units - Extension

Use the following while answering these questions. Give all your answers correct to 1 decimal place unless otherwise stated.

$$1\text{ kg} = 2.2\text{ lb}$$

$$1\text{ litre} = 1\frac{3}{4}\text{ pints}$$

$$1\text{ inch} = 2.5\text{ cm}$$

$$1\text{ m} = 39.3\text{ inches}$$

$$1\text{ gallon} = 4.5\text{ litres}$$

$$1\text{ foot} = 30.5\text{ cm}$$

$$1\text{ km} = \frac{5}{8}\text{ mile}$$

1. A swiss roll recipe requires a baking tin which is 20cm wide, and 250ml of the mixture. How long should the tin be, in inches, and how much mixture is needed, in pints?

2. The length of my garden is 18 feet. What is the length of the garden in metres?

3. Jackie's mass is 163lb and her height is 5 foot 8 inches. Give her mass in kg and her height in metres.

4. The distance from the bank to the train station is 2.7km. Give this distance in miles.

5. The height of a tree is 7.34m. What is its height in feet?

6. I use 15 litres of water when I take a shower. How much water is this in gallons?

7. Valerie has a vase which has a mass of 1.3lb, a capacity of 2.2 pints and a height of 1 foot 3 inches. What is its mass in g, capacity in litres and height in cm?

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8. I have two dogs, Eb and Flo. Eb has a mass of 36kg and Flo's mass is 58lb. Which dog has the greater mass? You must show all of your working.

9. Two birds, Tweet and Ema are 9.2cm and 4.1 inches tall respectively. Give the height of Tweet to the height of Ema as a ratio, in the form 1:n.

10. A group of three girls have heights 1.3m, 5 foot 2 inches and 142cm. Find the mean and range of the girl's heights. Give your answers in cm.

11. A rectangle has a width of 6m and a length of 23 feet 2 inches. Find the length of the diagonal in cm.

12. The mass of a parcel is 1.2kg correct to 1 decimal place. Find the upper and lower bounds of the mass, giving your answer in lb, without rounding.

Converting between Metric and Imperial Units - Extension - **Answers**

Use the following while answering these questions. Give all your answers correct to 1 decimal place unless otherwise stated.

$$1\text{kg} = 2.2\text{lb}$$

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1. A swiss roll recipe requires a baking tin which is 20cm wide, and 250ml of the mixture. How long should the tin be, in inches, and how much mixture is needed, in pints?

$$20\text{cm} = 8\text{ inches}$$

$$250\text{ml} = 0.4\text{ pints}$$

2. The length of my garden is 18 feet. What is the length of the garden in metres?

$$5.5\text{m}$$

3. Jackie's mass is 163lb and her height is 5 foot 8 inches. Give her mass in kg and her height in metres.

$$163\text{lb} = 74.1\text{kg}$$

$$5\text{ foot } 8\text{ inches} = 1.7\text{m}$$

4. The distance from the bank to the train station is 2.7km. Give this distance in miles.

$$1.7\text{ miles}$$

5. The height of a tree is 7.34m. What is its height in feet?

$$24.1\text{ feet}$$

6. I use 15 litres of water when I take a shower. How much water is this in gallons?

$$3.3\text{ gallons}$$

7. Valerie has a vase which has a mass of 1.3lb, a capacity of 2.2 pints and a height of 1 foot 3 inches. What is its mass in g, capacity in litres and height in cm?

$$1.3\text{lb} = 590.9\text{g}$$

$$2.2\text{ pints} = 1.3\text{ litres}$$

$$1\text{ foot } 3\text{ inches} = 38\text{cm}$$

8. I have two dogs, Eb and Flo. Eb has a mass of 36kg and Flo's mass is 58lb. Which dog has the greater mass? You must show all of your working.

Either Eb weighs 79.2lb or Flo weighs 26.4kg; Eb has the greater mass.

9. Two birds, Tweet and Ema are 9.2cm and 4.1 inches tall respectively. Give the height of Tweet to the height of Ema as a ratio, in the form 1:n.

$$\mathbf{9.2\text{cm}:10.25\text{cm} = 1:1.1 \text{ or } 3.68 \text{ inches}:4.1\text{inches} = 1:1.1}$$

10. A group of three girls have heights 1.3m, 5 foot 2 inches and 142cm. Find the mean and range of the girl's heights. Give your answers in cm.

$$\frac{\mathbf{130 + 157.5 + 142}}{\mathbf{3}} = \mathbf{143.2\text{cm}}$$

$$\mathbf{Range = 27.5\text{cm}}$$

11. A rectangle has a width of 6m and a length of 23 feet 2 inches. Find the length of the diagonal in cm.

$$\sqrt{\mathbf{706.5^2 + 600^2}} = \mathbf{926.9\text{cm}}$$

12. The mass of a parcel is 1.2kg correct to 1 decimal place. Find the upper and lower bounds of the mass, giving your answer in lb, without rounding.

$$\mathbf{Bounds \text{ in kg are } 1.15\text{kg} \text{ and } 1.25\text{kg}}$$

$$\mathbf{Bounds \text{ are } 2.53\text{lb} \text{ and } 2.75\text{lb}}$$

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1 litre = $1\frac{3}{4}$ pints

1 inch = 2.5cm

1m = 39.3 inches

1 gallon = 4.5 litres

1 foot = 30.5cm

1km = $\frac{5}{8}$ mile

1. Give 7 inches in cm.

2. Give 5kg in lb.

3. Give 10 foot in m.

4. Give 8.2lb in kg.

5. Give 7.3 litres in gallons.

6. Give 5 pints in litres.

7. Give 15m in inches.

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8. Give 4 foot 3 inches in m.

9. Give 29cm in inches.

10. Give 12 gallons in litres.

11. Give 3m in inches.

12. Give 4.8lb in g, giving your answer correct to the nearest hundred.

Converting between Metric and Imperial Units **Answers**

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1. Give 7 inches in cm.

17.5cm

2. Give 5kg in lb.

11lb

3. Give 10 foot in m.

3.1m

4. Give 8.2lb in kg.

3.7kg

5. Give 7.3 litres in gallons.

1.6 gallons

6. Give 5 pints in litres.

2.9 litres

7. Give 15m in inches.

589.5 inches

8. Give 4 foot 3 inches in m.

1.3m

9. Give 29cm in inches.

11.6 inches

10. Give 12 gallons in litres.

54 litres

11. Give 3m in inches.

117.9 inches

12. Give 4.8lb in g, giving your answer correct to the nearest hundred.

2200g