

CONVERTING UNITS – PRACTICE QUESTIONS
CALCULATOR ALLOWED



metatutor

1.

Convert into centimetres:

(a) $3 \text{ m} = 300 \text{ cm}$

(b) $9 \text{ m} = 900 \text{ cm}$

(c) $7.5 \text{ m} = 750 \text{ cm}$

(d) $11.3 \text{ m} = 1130 \text{ cm}$

(e) $9.17 \text{ m} = 917 \text{ cm}$

(f) $12.25 \text{ m} = 1225 \text{ cm}$

(g) $13.06 \text{ m} = 1306 \text{ cm}$

(h) $25.7 \text{ m} = 2570 \text{ cm}$

(i) $0.88 \text{ m} = 88 \text{ cm}$

(j) $0.19 \text{ m} = 19 \text{ cm}$

(k) $2\frac{1}{2} \text{ m} = 250 \text{ cm}$

(l) $4\frac{3}{4} \text{ m} = 475 \text{ cm}$

2.

Convert into metres:

(a) $500 \text{ cm} = 5 \text{ m}$

(b) $800 \text{ cm} = 8 \text{ m}$

(c) $340 \text{ cm} = 3.4 \text{ m}$

(d) $990 \text{ cm} = 9.9 \text{ m}$

(e) $765 \text{ cm} = 7.65 \text{ m}$

(f) $611 \text{ cm} = 6.11 \text{ m}$

(g) $75 \text{ cm} = 0.75 \text{ m}$

(h) $98 \text{ cm} = 0.98 \text{ m}$

(i) $1,200 \text{ cm} = 12 \text{ m}$

(j) $7,250 \text{ cm} = 72.5 \text{ m}$

(k) $10,880 \text{ cm} = 108.8 \text{ m}$

(l) $15.5 \text{ cm} = 0.155 \text{ m}$

3.

Convert into centimetres:

(a) $70 \text{ mm} = 7 \text{ cm}$

(b) $130 \text{ mm} = 13 \text{ cm}$

(c) $14 \text{ mm} = 1.4 \text{ cm}$

(d) $82 \text{ mm} = 8.2 \text{ cm}$

(e) $210 \text{ mm} = 21 \text{ cm}$

(f) $107 \text{ mm} = 10.7 \text{ cm}$

(g) $91 \text{ mm} = 9.1 \text{ cm}$

(h) $809 \text{ mm} = 80.9 \text{ cm}$

(i) $9 \text{ mm} = 0.9 \text{ cm}$

(j) $2,345 \text{ mm} = 234.5 \text{ cm}$

(k) $14,100 \text{ mm} = 1410 \text{ cm}$

(l) $6,659 \text{ mm} = 665.9 \text{ cm}$

4.

Convert into millimetres:

(a) $13 \text{ cm} = 130 \text{ mm}$

(c) $55.5 \text{ cm} = 555 \text{ mm}$

(e) $134 \text{ cm} = 1340 \text{ mm}$

(g) $62.6 \text{ cm} = 626 \text{ mm}$

(i) $111.1 \text{ cm} = 1111 \text{ mm}$

(k) $2.25 \text{ cm} = 22.5 \text{ mm}$

(b) $72 \text{ cm} = 720 \text{ mm}$

(d) $0.6 \text{ cm} = 6 \text{ mm}$

(f) $233.9 \text{ cm} = 2339 \text{ mm}$

(h) $1.9 \text{ cm} = 19 \text{ mm}$

(j) $1,000 \text{ cm} = 10000 \text{ mm}$

(l) $10.88 \text{ cm} = 108.8 \text{ mm}$

5.

Convert into kilometres:

(a) $9,000 \text{ m} = 9 \text{ km}$

(c) $6,600 \text{ m} = 6.6 \text{ km}$

(e) $780 \text{ m} = 0.78 \text{ km}$

(g) $408 \text{ m} = 0.408 \text{ km}$

(i) $2,565 \text{ m} = 2.565 \text{ km}$

(k) $12 \text{ m} = 0.012 \text{ km}$

(b) $32,000 \text{ m} = 32 \text{ km}$

(d) $5,490 \text{ m} = 5.49 \text{ km}$

(f) $1,015 \text{ m} = 1.015 \text{ km}$

(h) $919 \text{ m} = 0.919 \text{ km}$

(j) $10,090 \text{ m} = 10.09 \text{ km}$

(l) $22,252 \text{ m} = 22.252 \text{ km}$

6.

Convert into metres:

(a) $2 \text{ km} = 2000 \text{ m}$

(c) $6.5 \text{ km} = 6500 \text{ m}$

(e) $9.25 \text{ km} = 9250 \text{ m}$

(g) $0.8 \text{ km} = 800 \text{ m}$

(i) $1.895 \text{ km} = 1895 \text{ m}$

(k) $3\frac{1}{5} \text{ km} = 3500 \text{ m}$

(b) $18 \text{ km} = 18000 \text{ m}$

(d) $11.1 \text{ km} = 11100 \text{ m}$

(f) $20.19 \text{ km} = 20190 \text{ m}$

(h) $0.03 \text{ km} = 30 \text{ m}$

(j) $0.133 \text{ km} = 133 \text{ m}$

(l) $7\frac{3}{8} \text{ km} = 7375 \text{ m}$

7.

Convert into litres:

(a) 7,000 ml = 7 L

(c) 6,700 ml = 6.7 L

(e) 1,250 ml = 1.25 L

(g) 9,199 ml = 9.199 L

(i) 475 ml = 0.475 L

(k) 56 ml = 0.056 L

(b) 19,000 ml = 19 L

(d) 15,800 ml = 15.8 L

(f) 3,360 ml = 3.36 L

(h) 900 ml = 0.9 L

(j) 2,225 ml = 2.225 L

(l) 101,500 ml = 101.5 L

8.

Convert into millilitres:

(a) 90 litres = 90000 ml

(c) 44.1 litres = 44100 ml

(e) 9.04 litres = 9040 ml

(g) 1.455 litres = 1455 ml

(i) 0.02 litres = 20 ml

(k) $9\frac{9}{10}$ litres = 9900 ml

(b) 7.2 litres = 7200 ml

(d) 8.88 litres = 8880 ml

(f) 0.7 litres = 700 ml

(h) 32.55 litres = 32550 ml

(j) 0.336 litres = 336 ml

(l) $3\frac{2}{5}$ litres = 3400 ml

9.

Convert into kilograms:

(a) 5,000 g = 5 kg

(c) 6,500 g = 6.5 kg

(e) 750 g = 0.75 kg

(g) 1,444 g = 1.444 kg

(i) 80 g = 0.08 kg

(k) 9,080 g = 9.08 kg

(b) 95,000 g = 95 kg

(d) 12,200 g = 12.2 kg

(f) 895 g = 0.895 kg

(h) 2,468 g = 2.468 kg

(j) 15,830 g = 15.83 kg

(l) 350.4 g = 0.3504 kg

10.

Convert into grams:

(a) $7 \text{ kg} = 7000 \text{ g}$

(c) $10.5 \text{ kg} = 10500 \text{ g}$

(e) $8.15 \text{ kg} = 8150 \text{ g}$

(g) $0.41 \text{ kg} = 410 \text{ g}$

(i) $7\frac{3}{8} \text{ kg} = 7375 \text{ g}$

(k) $1,000 \text{ kg} = 1000000 \text{ g}$

(b) $125 \text{ kg} = 125000 \text{ g}$

(d) $6.9 \text{ kg} = 6900 \text{ g}$

(f) $10.66 \text{ kg} = 10660 \text{ g}$

(h) $1.657 \text{ kg} = 1657 \text{ g}$

(j) $14.408 \text{ kg} = 14408 \text{ g}$

(l) $15\frac{19}{20} \text{ kg} = 15950 \text{ g}$

11.

Convert into minutes:

(a) $2 \text{ hours} = 120 \text{ mins}$

(c) $1.5 \text{ hours} = 90 \text{ mins}$

(e) $0.5 \text{ hours} = 30 \text{ mins}$

(g) $11.2 \text{ hours} = 672 \text{ mins}$

(i) $3\frac{1}{3} \text{ hours} = 200 \text{ mins}$

(k) $4\frac{11}{20} \text{ hours} = 273 \text{ mins}$

(b) $5 \text{ hours} = 300 \text{ mins}$

(d) $8.25 \text{ hours} = 495 \text{ mins}$

(f) $3.3 \text{ hours} = 198 \text{ mins}$

(h) $\frac{7}{10} \text{ hours} = 42 \text{ mins}$

(j) $2.65 \text{ hours} = 159 \text{ mins}$

(l) $19.95 \text{ hours} = 1197 \text{ mins}$

12.

Convert into hours:

(a) $180 \text{ minutes} = 3 \text{ hours}$

(c) $36 \text{ minutes} = 0.6 \text{ hours}$

(e) $570 \text{ minutes} = 9.5 \text{ hours}$

(g) $258 \text{ minutes} = 4.3 \text{ hours}$

(i) $84 \text{ minutes} = 1.4 \text{ hours}$

(k) $438 \text{ minutes} = 7.3 \text{ hours}$

(b) $45 \text{ minutes} = 0.75 \text{ hours}$

(d) $426 \text{ minutes} = 7.1 \text{ hours}$

(f) $1,005 \text{ minutes} = 16.75 \text{ hours}$

(h) $9 \text{ minutes} = 0.15 \text{ hours}$

(j) $18,000 \text{ minutes} = 300 \text{ hours}$

(l) $669 \text{ minutes} = 11.15 \text{ hours}$

13.

Convert into minutes:

(a) 300 seconds = 5 mins

(b) 480 seconds = 8 mins

(c) 570 seconds = 9.5 mins

(d) 162 seconds = 2.7 mins

(e) 285 seconds = 4.75 mins

(f) 24 seconds = 0.4 mins

(g) 1,215 seconds = 20.25 mins

(h) 774 seconds = 12.9 mins

(i) 513 seconds = 8.55 mins

(j) 54,000 seconds = 900 mins

(k) 1,482 seconds = 24.7 mins

(l) 74.4 seconds = 1.24 mins

14.

Convert into seconds:

(a) 9 minutes = 540 seconds

(b) 13 minutes = 780 seconds

(c) $4\frac{1}{2}$ minutes = 270 seconds

(d) 11.1 minutes = 666 seconds

(e) $8\frac{2}{3}$ minutes = 520 seconds

(f) 20.25 minutes = 1215 seconds

(g) 3.45 minutes = 207 seconds

(h) $16\frac{4}{5}$ minutes = 1008 seconds

(i) $6\frac{3}{20}$ minutes = 369 seconds

(j) 1,830 minutes = 109800 seconds

(k) $\frac{13}{30}$ minutes = 26 seconds

(l) 3.48 minutes = 208.8 seconds

15.

(a) Convert 1,500 metres into kilometres.

$$1.5 \text{ km}$$

(b) Convert 7.7 litres into millilitres.

$$7700 \text{ mL}$$

(c) Convert 22 millimetres into centimetres.

$$2.2 \text{ cm}$$

(d) Convert 72 seconds into minutes.

$$1.2 \text{ minutes}$$

(e) Convert 3.6 metres into centimetres.

360 cm

(f) Convert $5\frac{1}{2}$ hours into minutes.

330 minutes

(g) Convert 520 grams into kilograms.

0.52 kg

(h) Convert 650 millilitres into litres.

0.65 L

(i) Convert $3\frac{1}{3}$ minutes into seconds.

200 seconds

(j) Convert $11\frac{3}{5}$ kilometres into metres.

11600 m

(k) Convert 0.36 litres into millilitres.

360 ml

(l) Convert 108 minutes into hours.

1.8 hours

(m) Convert 7.65 kilograms into grams.

7650 g

(n) Convert 55,500 kilometres into metres.

55.5 m

(o) Convert $6\frac{8}{15}$ hours into minutes.

392 minutes

(p) Convert 569.7 grams into kilograms.

0.5697 kg

16.

(a) Convert 8,000 millimetres into metres.

8 m

(b) Convert 1.25 metres into millimetres.

1250 mm

(c) Convert 2 hours into seconds.

7200 seconds

(d) Convert 12,600 seconds into hours.

3.5 hours

(e) Convert $9\frac{1}{8}$ metres into millimetres.

9125 mm

(f) Convert 900 seconds into hours.

0.25 hours

(g) Convert 19,950 millimetres into metres.

19.95 m

(h) Convert $6\frac{5}{6}$ hours into seconds.

2400 seconds

(i) Convert $1\frac{3}{4}$ metres into millimetres.

1750 mm

(j) Convert 30,420 seconds into hours.

8.4 hours

(k) Convert $\frac{13}{30}$ hours into seconds.

1560 seconds

(l) Convert 0.18 metres into millimetres.

180 mm

17.

The women's shot put world record is 22.63 metres.

The men's world record is 49 centimetres further than the women's world record.

Find the men's shot put world record, in metres.

$$49 \text{ cm} = 0.49 \text{ m}$$

$$22.63 + 0.49 = \underline{23.12 \text{ m}}$$

18.

Agnes is hosting a party.

She has made 18 litres of fruit punch.

She is going to serve the punch in plastic cups of capacity 300 millilitres.

How many plastic cups can Agnes fill?

$$18 \text{ L} = 18000 \text{ ml}$$

$$18000 \div 300 = \underline{60 \text{ cups}}$$

19.

Apples have a mass of 124 g.

Mangos have a mass of 182 g.

Watermelons have a mass of 8.85 kg.

Find the total mass of 12 apples, 8 mangos and 3 watermelons, in kilograms.

$$124 \text{ g} = 0.124 \text{ kg}$$

$$182 \text{ g} = 0.182 \text{ kg}$$

$$0.124 \times 12 = 1.488 \text{ kg}$$

$$0.182 \times 8 = 1.456 \text{ kg}$$

$$8.85 \times 3 = 26.55 \text{ kg}$$

$$1.488 + 1.456 + 26.55 = \underline{29.494 \text{ kg}}$$

20.

Brandon works in a toy factory, assembling toys.
It takes Brandon 16 seconds to assemble each toy.

How many toys can Brandon assemble in an hour?

$$\begin{aligned}1 \text{ hour} &= 60 \text{ minutes} \\60 \text{ minutes} &= 3600 \text{ seconds} \\3600 \div 16 &= \underline{225} \text{ toys}\end{aligned}$$

21.

A piece of card has a thickness of 0.24 millimetres.
A piece of paper has a thickness of 0.11 millimetres.
Chelsea is going to make a stack of 5,000 pieces of card and 8,000 pieces of paper.

Work out the height of the stack, in metres.

$$\begin{aligned}0.24 \times 5000 &= 1200 \text{ mm} \\0.11 \times 8000 &= 880 \text{ mm} \\1200 + 880 &= 2080 \text{ mm} \\2080 \div 100 \div 10 &= \underline{2.08} \text{ m}\end{aligned}$$

22.

A baby is born every 48 seconds in England.

Use this fact to work out how many babies are born in England each day.

$$\begin{aligned}1 \text{ day} &= 24 \text{ hours} \\&= 24 \times 60 = 1440 \text{ minutes} \\&= 1440 \times 60 = 86400 \text{ seconds} \\86400 \div 48 &= \underline{1800} \text{ babies}\end{aligned}$$

23.

Convert 5 metres per second into kilometres per hour.

$$5 \text{ m/s} \xrightarrow{\times 60} 300 \text{ m/min} \xrightarrow{\times 60} 18000 \text{ m/h} \xrightarrow{\div 1000} 18 \text{ km/h}$$

24.

Convert 45 kilometres per hour into metres per second.

$$45 \text{ km/h} \xrightarrow{\times 1000} 45000 \text{ m/h} \xrightarrow{\div 60} 750 \text{ m/min} \xrightarrow{\div 60} 12.5 \text{ m/s}$$

25.

Adele's car has a maximum speed of 126 kilometres per hour.

Bernadette's car has a maximum speed of 36 metres per second.

Who's car has the highest maximum speed?

$$126 \text{ km/h} \xrightarrow{\times 1000} 126000 \text{ m/h} \xrightarrow{\div 60} 2100 \text{ m/min} \xrightarrow{\div 60} 35 \text{ m/s}$$

$$\begin{aligned} \text{Adele} &= 35 \text{ m/s} \\ \text{Bernadette} &= 36 \text{ m/s} \end{aligned}$$

Bernadette's car