Trig 7 Answers

Sine rule for sides - Answers (p.27)

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

1a)

$$\frac{a}{\sin a} = \frac{b}{\sin B}$$

$$\frac{x}{\sin 38} = \frac{12}{\sin 44}$$

$$x = \frac{12 \sin 38}{\sin 44}$$

$$= 10.6\text{ cm}$$

b)

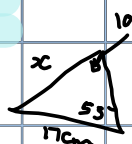
$$\frac{x}{\sin 67} = \frac{23}{\sin 54}$$

$$x = \frac{23 \sin 67}{\sin 54}$$

$$= 26.2\text{ cm}$$

c)

$$\frac{x}{\sin 55} = \frac{17}{\sin 100}$$



$$x = \frac{17 \sin 55}{\sin 100}$$

$$= 14.1\text{ cm}$$

d)

$$\frac{x}{\sin 130} = \frac{2.4}{\sin 32}$$

$$x = \frac{2.4 \sin 130}{\sin 32}$$

$$= 34.7\text{ cm}$$

e)

$$\frac{x}{\sin 56} = \frac{1.4}{\sin 74}$$

$$x = \frac{1.4 \sin 56}{\sin 74}$$

$$= 1.2\text{ m}$$

f)

$$\frac{x}{\sin 25} = \frac{4.2}{\sin 40}$$

$$x = \frac{4.2 \sin 25}{\sin 40}$$

$$= 2.8\text{ m}$$

g)

$$\frac{x}{\sin 47} = \frac{4}{\sin 78}$$

$$x = \frac{4 \sin 47}{\sin 78}$$

$$= 3.0\text{ mm}$$

h)

$$\frac{x}{\sin 72} = \frac{3.7}{\sin 52}$$

$$x = \frac{3.7 \sin 72}{\sin 52}$$

$$= 4.5\text{ m}$$

Trig 7 Answers

$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

2a) $\frac{x}{\sin 38} = \frac{12}{\sin 46}$

$x = \frac{12 \sin 38}{\sin 46}$

$= 10.3\text{ cm}$

b) $\frac{x}{\sin 100} = \frac{10}{\sin 33}$

$x = \frac{10 \sin 100}{\sin 33}$

$= 18.1\text{ cm}$

c) $\frac{x}{\sin 55} = \frac{6}{\sin 41}$

$x = \frac{6 \sin 55}{\sin 41}$

$= 7.5\text{ cm}$

d) $\frac{x}{\sin 61} = \frac{4.8}{\sin 53}$

$x = \frac{4.8 \sin 61}{\sin 53}$

$= 5.3\text{ cm}$

e) $\frac{x}{\sin 88} = \frac{17}{\sin 62}$

$x = \frac{17 \sin 88}{\sin 62}$

$= 19.2\text{ cm}$

f) $\frac{x}{\sin 52} = \frac{3.6}{\sin 34}$

$x = \frac{3.6 \sin 52}{\sin 34}$

$= 5.1\text{ cm}$

g) $\frac{x}{\sin 92} = \frac{9.4}{\sin 48}$

$x = \frac{9.4 \sin 92}{\sin 48}$

$= 12.6\text{ cm}$

h) $\frac{x}{\sin 52} = \frac{7.5}{\sin 48}$

$x = \frac{7.5 \sin 52}{\sin 48}$

$= 8.0\text{ cm}$

i) $\frac{x}{\sin 9} = \frac{3.4}{\sin 22}$

$x = \frac{3.4 \sin 9}{\sin 22}$

$= 1.4\text{ cm}$

j) $\frac{x}{\sin 31} = \frac{2.9}{\sin 36}$

$x = \frac{2.9 \sin 31}{\sin 36}$

$= 2.5\text{ cm}$

k) $\frac{x}{\sin 63} = \frac{37}{\sin 99}$

$x = \frac{37 \sin 63}{\sin 99}$

$= 33.4\text{ cm}$