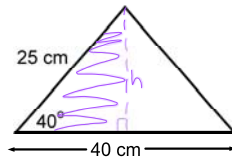


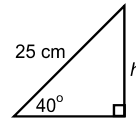
Notes for page 8.18

1. Find the area



a) First draw the height on triangle and label it, h .

b) Now use TRIG to solve for the height, h .



** Notice that 40 cm is not a side of a right triangle.

$$\sin 40^\circ = \frac{h}{25}$$

$$\frac{0.6428}{1} = \frac{h}{25}$$

$$h = 25(0.6428)$$

$$h = 16.1 \text{ cm}$$

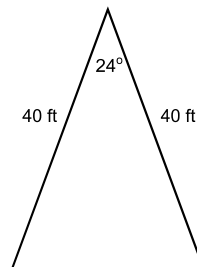
c) Now find the area of the triangle using h .

$$A = \frac{1}{2}bh$$

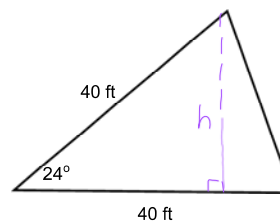
$$A = \frac{1}{2}(40)(16.1)$$

$$A = 322 \text{ cm}^2$$

2. Find the area



a) Turn triangle sideways



b) Draw height, h , on triangle

c) Now use TRIG to solve for the height, h .

$$\sin 24^\circ = \frac{h}{40}$$

$$\frac{0.4067}{1} = \frac{h}{40}$$

$$h = (0.4067)(40)$$

$$h = 16.3 \text{ ft}$$

d) Now find the area of the triangle using h .

$$A = \frac{1}{2}bh$$

$$A = \frac{1}{2}(40)(16.3)$$

$$A = 326 \text{ ft}^2$$