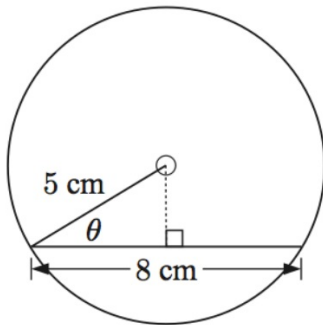


Bell Work - IB Math Studies 2

Find the value of the unknown in:

a

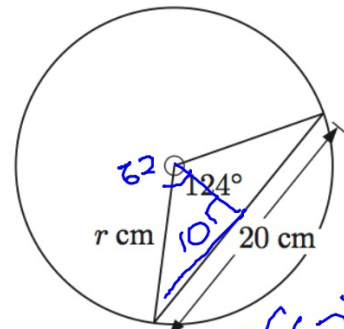


$$\cos \theta = \frac{4}{5}$$

$$\theta = \cos^{-1}\left(\frac{4}{5}\right)$$

$\therefore \theta = 36.9^\circ$

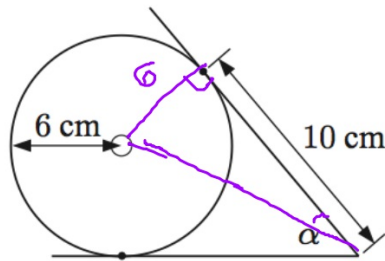
b



$$\sin(62) = \frac{10}{r}$$

$$r = 11.3 \text{ cm}$$

c



SM can use

$$\tan x = \frac{6}{10}$$

$$\tan^{-1}\left(\frac{6}{10}\right)$$

$$x = 30.9^\circ$$

$$\alpha = 61.8^\circ$$

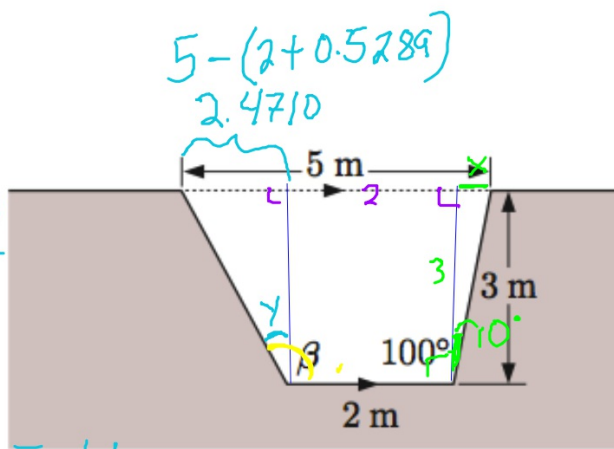
Assignment:

15 C.1 # 2, 5, 7, 8, 9

C.2 # 4, 5

$$\tan y = \frac{2.4710}{3}$$

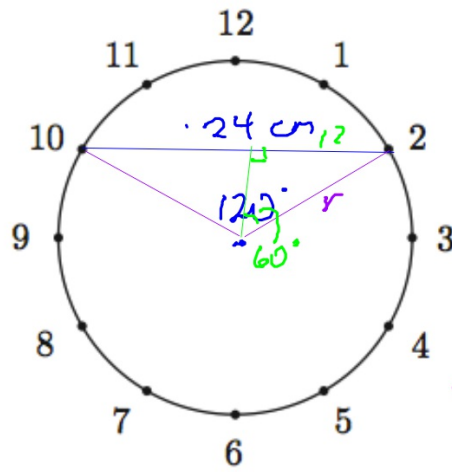
$$\tan^{-1}\left(\frac{2.4710}{3}\right) = y$$



$$\tan \theta = \frac{x}{3}$$
$$x = 0.5289$$

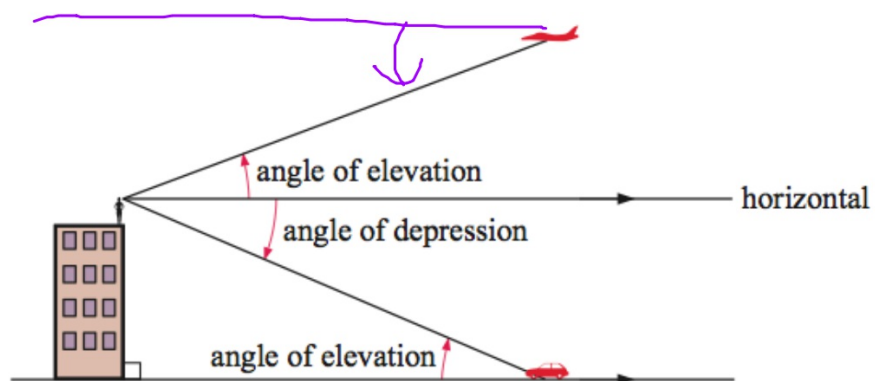
$$\frac{360}{12} = 30^\circ$$

$$30 \times 4 = 120^\circ$$

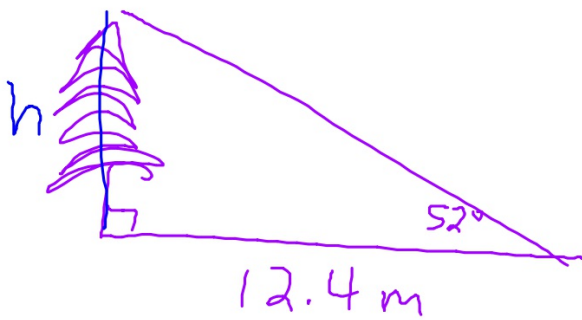


$$\sin 60 = \frac{12}{r}$$

$$r = 13.9 \text{ cm}$$

D**PROBLEM SOLVING USING TRIGONOMETRY****ANGLES OF ELEVATION AND DEPRESSION**

When measured from a point 12.4 m from its base, the angle of elevation to the top of a tree is 52° . Find the height of the tree.

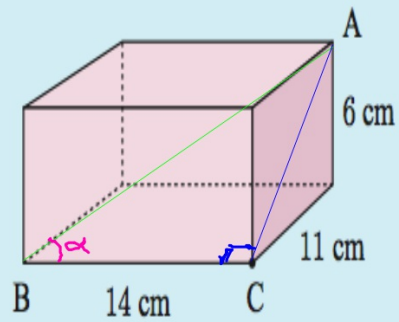


$$h = 15.9 \text{ m}$$

E**3-DIMENSIONAL PROBLEM SOLVING**

A rectangular prism has the dimensions shown alongside.
Find the angle between the diagonal AB and the edge BC.

$$\tan \alpha = \frac{12.53}{14}$$

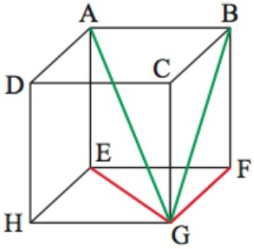


$$m \angle ABC$$

$$AC^2 = 6^2 + 11^2$$

$$AC = 12.53 \text{ cm}$$

SHADOW LINES (PROJECTIONS)



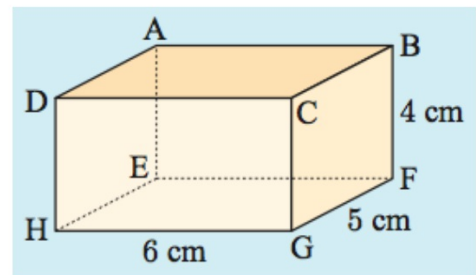
THE ANGLE BETWEEN A LINE AND A PLANE

The angle between a line and a plane is the angle between the line and its projection on the plane.

Find the angle between the following line segments and the base plane EFGH of the rectangular prism:

a DG

b BH



Assignment:

15 D # 6, 8, 9

E.1 # 3, 6

~~E.2 # 3~~