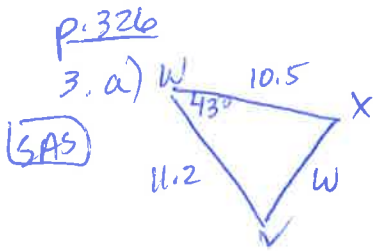


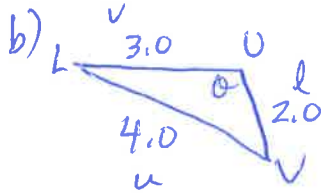
U5/L8 HW p.326 3a,b 4a,c 5,6
 p.318 1,7
 p.339 12



$$w^2 = x^2 + v^2 - 2xv \cos W$$

$$w^2 = 11.2^2 + 10.5^2 - 2(11.2)(10.5) \cos 43^\circ$$

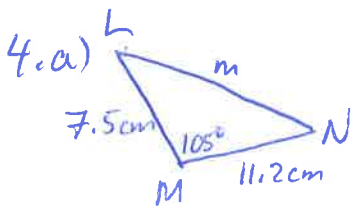
$$w = 8.0 \text{ units}$$



$$\cos U = \frac{l^2 + v^2 - u^2}{2lv}$$

$$\cos U = \frac{2^2 + 3^2 - 4^2}{2(2)(3)}$$

$$\angle U = 104^\circ$$



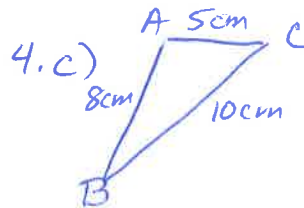
(i) $m^2 = n^2 + l^2 - 2nl \cos M$
 $m^2 = 7.5^2 + 11.2^2 - 2(7.5)(11.2) \cos 105^\circ$
 $m = 15.0 \text{ cm}$

(ii) $\frac{\sin L}{l} = \frac{\sin M}{m}$

$$\frac{\sin L}{11.2} = \frac{\sin 105^\circ}{15.0}$$

$$\angle L = 46^\circ$$

(iii) $\angle N = 29^\circ$ (AST)



(i) $\cos A = \frac{b^2 + c^2 - a^2}{2bc}$
 $\cos A = \frac{5^2 + 8^2 - 10^2}{2(5)(8)}$

$$\angle A = 96^\circ$$

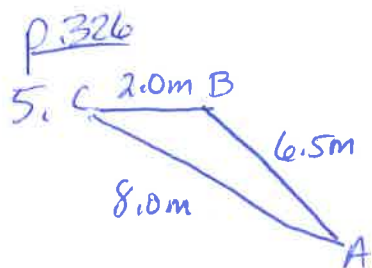
(ii) $\frac{\sin B}{b} = \frac{\sin A}{a}$

$$\frac{\sin B}{5} = \frac{\sin 96^\circ}{10}$$

$$\angle B = 30^\circ$$

(iii) $\angle C = 54^\circ$ (AST)

Text says
 $\angle A = 98^\circ$
 $\angle B = 30^\circ$
 $\angle C = 52^\circ$
 b/c they solved for $\angle C$ first



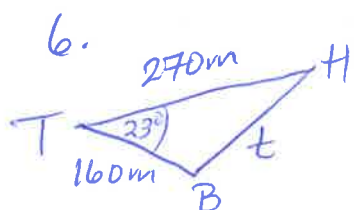
Let $\angle A$ rep. the angle within which the shot should be made.

$$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

$$\cos A = \frac{8^2 + 6.5^2 - 2^2}{2(8)(6.5)}$$

$$\angle A \doteq 11^\circ$$

\therefore The shot must be made within an angle of approx 11° .



Let t rep the distance from the ball to the hole.

$$t^2 = b^2 + h^2 - 2bh \cos T$$

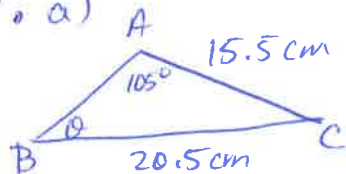
$$t^2 = 270^2 + 160^2 - 2(270)(160) \cos 23^\circ$$

$$t \doteq 138$$

\therefore The ball is approx 138 m from the hole.

p. 318

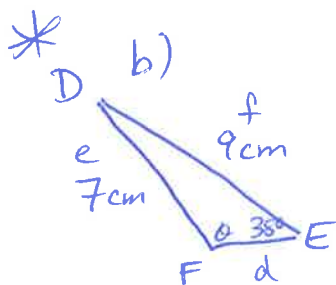
#10 a)



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

$$\frac{\sin B}{15.5} = \frac{\sin 105^\circ}{20.5}$$

$$\angle B \doteq 47^\circ$$



$$\frac{\sin F}{f} = \frac{\sin E}{e}$$

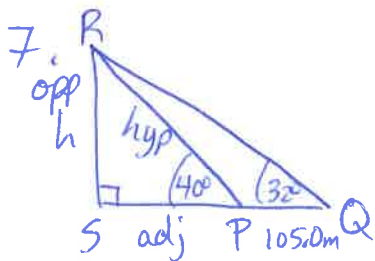
$$\frac{\sin F}{9} = \frac{\sin 38^\circ}{7}$$

$$\angle F \doteq 52^\circ$$

$\because \angle F$ is obtuse

$$\therefore \angle F = 180^\circ - 52^\circ$$

$$\angle F = 128^\circ$$



(i) $\angle RPQ = 140^\circ$ (supp \angle 's)

and $\angle PRQ = 8^\circ$ (AST)

(ii) $\frac{RP}{\sin Q} = \frac{PQ}{\sin PRQ}$

$$\frac{RP}{\sin 32^\circ} = \frac{105.0}{\sin 8^\circ}$$

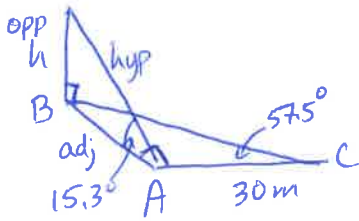
$$RP \doteq 399.8 \text{ m}$$

(iii) $\sin 40^\circ = \frac{h}{399.8}$

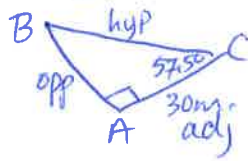
$$h \doteq 257.0$$

\therefore The height of the building is approx 257.0 m.

p 339 #12.



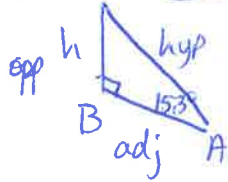
(i) solve for AB



$$\tan 57.5^\circ = \frac{AB}{30}$$

$$AB = 47.1 \text{ m}$$

(ii) solve for h



$$\tan 15.3^\circ = \frac{h}{47.1}$$

$$h = 13$$

∴ The pole is approx 13 m in height.

