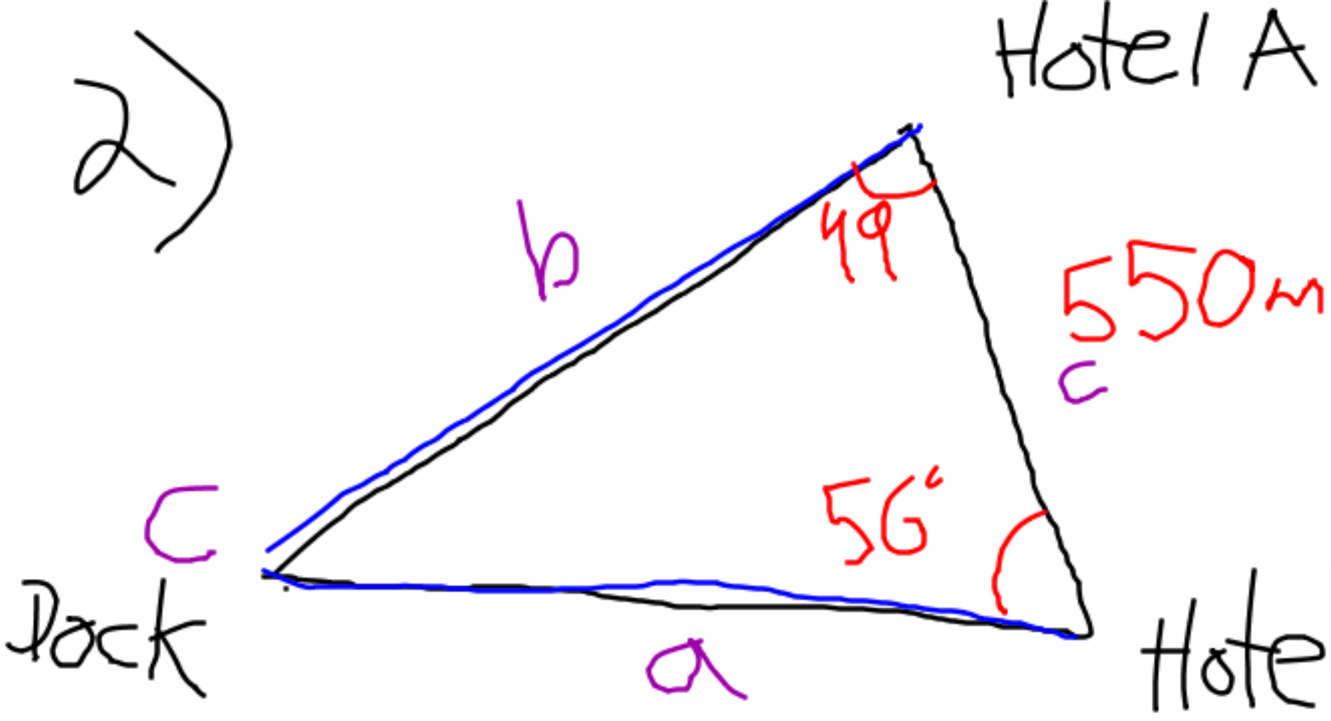
Sept. 29

1) a) SSS
SAS
Cosine law

b) $\angle K = 88^\circ$ $k = 14.5$ ∴ sine law

c) Pytha. Theorem or SOHCAHTOA

2)



$\angle A = 49°$ $a = 430m$

$\angle B = 56°$ $b = 472m$

$\angle C = 75°$ $c = 550m$

$\angle C = 180 - 49 - 56$

$= 75°$

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

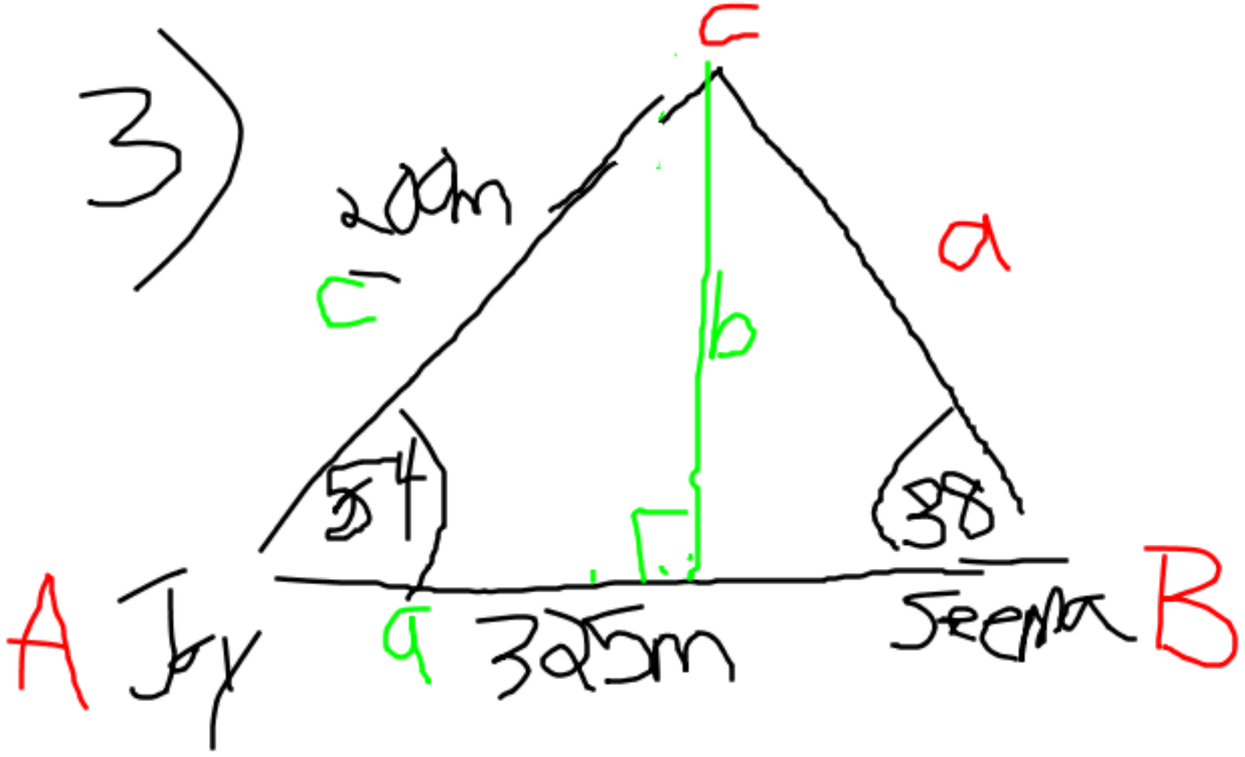
$\frac{550}{\sin 75} = \frac{a}{\sin 49}$ $\times \sin 49$

$430m = a$

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

$\therefore$ HA is 430m from the dock, HB is 472m

3)



$\angle A = 54°$ $a = 263m$

$\angle B = 38°$ $b = 200m$

$c = 325m$

$\angle C =$

$a^2 + b^2 = c^2$

$162.5^2 + 200^2 = c^2$

$26406.25 + 40,000 = c^2$

$\sqrt{66,406.25} = \sqrt{c^2}$

$257.6 = c$

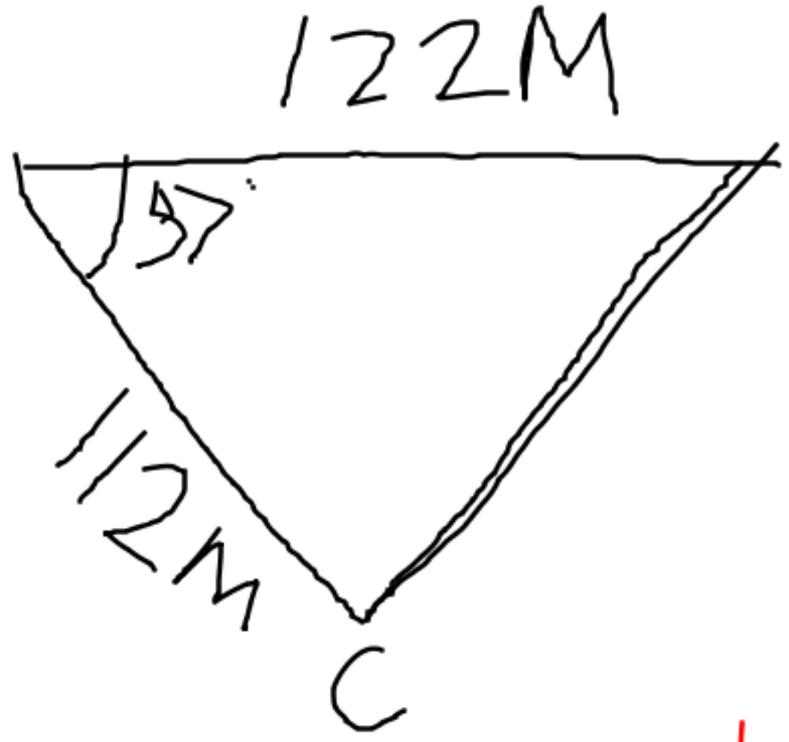
$258m$

$a = \frac{325}{2}$

$a = 162.5$

∴ The height of the balloon is 258m

4) A



$\angle A = 57°$

$\angle B =$

$\angle C =$

$a =$

$b = 112m$

$c = 122m$