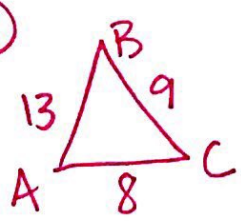
① 

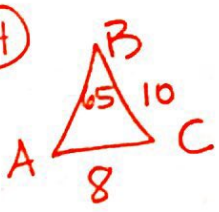

$13^2 = 9^2 + 8^2 - 2(9)(8)\cos C$

$169 = 145 - 144\cos C$

$24 = -144\cos C$

$-0.167 = \cos^{-1} C$

$\boxed{\angle C = 99.6°}$

④ 

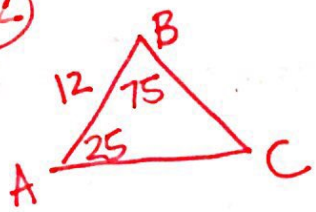

$\frac{\sin 65}{8} = \frac{\sin A}{10}$

$10\sin 65 = 8\sin A$

$1.132 = \sin^{-1} A$

Error

Not a triangle

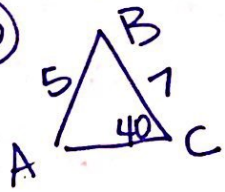
② 


$\angle B = 180 - 75 - 25 = 80$

$\frac{\sin 80}{12} = \frac{\sin 75}{b}$

$b\sin 80 = 12\sin 75$

$\boxed{b = 11.8}$

⑤ 


$\frac{\sin 40}{5} = \frac{\sin A}{7}$

$7\sin 40 = 5\sin A$

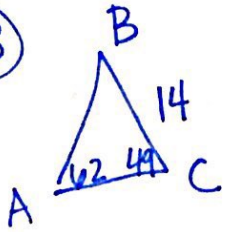
$0.8999 = \sin^{-1} A$

$A = 64.1$

$180 - 64.1 = 115.9$

$115.9 + 40 = 155.9$

2 Triangles

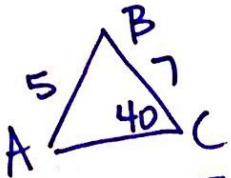
③ 


$\frac{\sin 62}{14} = \frac{\sin 49}{c}$

$c\sin 62 = 14\sin 49$

$\boxed{c = 12.0}$

T1:




$\boxed{\angle A = 64.1}$

$\angle B = 180 - 40 - 64.1$

$= \boxed{75.9°}$

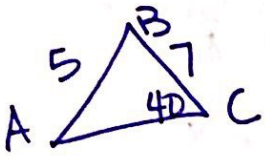
$\frac{\sin 75.9}{b} = \frac{\sin 40}{5}$

$5\sin 75.9 = b\sin 40$

$\boxed{b = 7.5}$

OR

T2:




$\boxed{\angle A = 115.9°}$

$\angle B = 180 - 115.9 - 40$

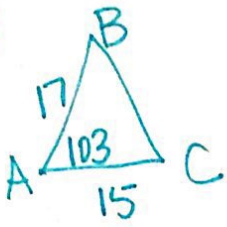
$= \boxed{24.1°}$

$\frac{\sin 24.1}{b} = \frac{\sin 40}{5}$

$5\sin 24.1 = b\sin 40$

$\boxed{b = 3.2}$

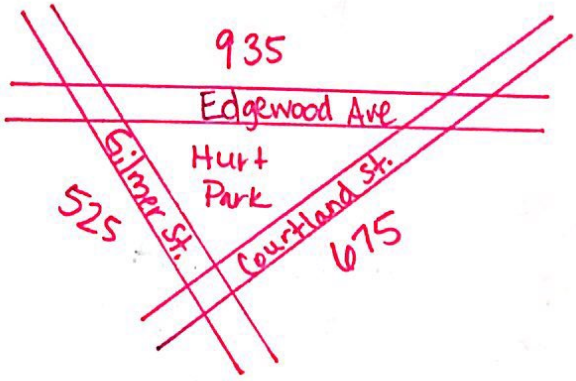
(6)




$A = \frac{1}{2}(17)(15)\sin 103$

$\boxed{A = 124.2}$

(7)

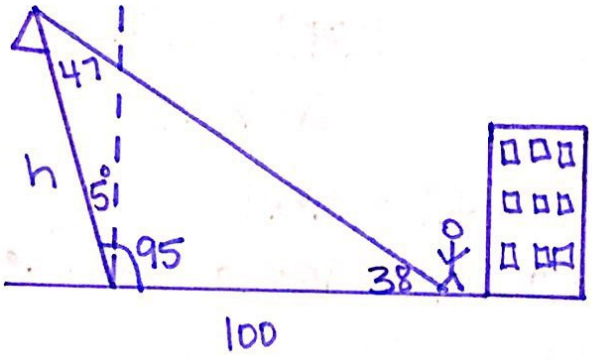



$S = \frac{935+675+525}{2} = 1067.5$

$A = \sqrt{1067.5(1067.5-935)(1067.5-675)(1067.5-525)}$

$\boxed{A = 173544.8\ ft^2}$

(8)



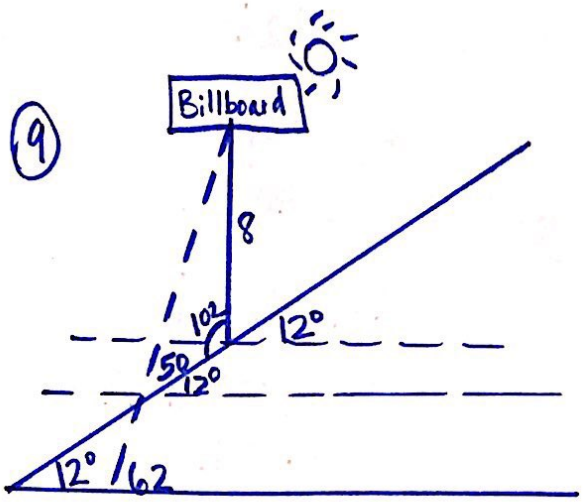

$180-95-38=47$

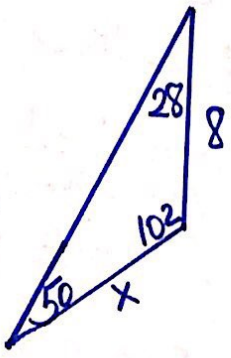
$\frac{\sin 47}{100} = \frac{\sin 38}{h}$

$h\sin 47 = 100\sin 38$

$\boxed{h = 84.2 ft}$

(9)



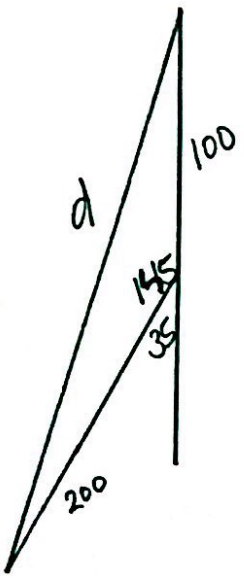

$180-102-50=28$

$\frac{\sin 28}{x} = \frac{\sin 50}{8}$

$8\sin 28 = x\sin 50$

$\boxed{4.9 = x \text{ ft}}$

(10)




$d^2 = 200^2 + 100^2 - 2(200)(100)\cos 145$

$\sqrt{d^2} = \sqrt{82766.08}$

$\boxed{d = 287.7 \text{ mi}}$