

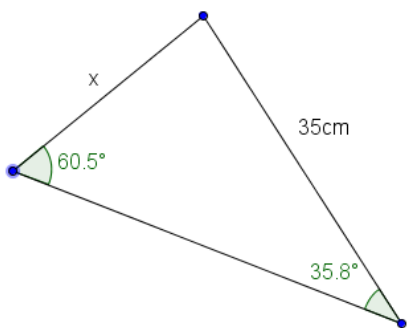
Trigonometry | Assignment

Name:	
Date:	I am on a mac computer ☐
My Achievement Goal for this chapter is... (Circle one) A+ A B C D	
(Teacher only) This assignment....	
Is Good to go ☐	Needs Corrections:

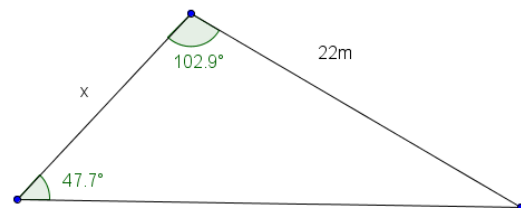
Make sure that you show all of your work!

1. Find the length of the missing side:

a.



b.



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2. How many triangles are possible given the following measurements? Justify your answer with written explanation:

a. $\triangle ABC$: $\angle A = 40^\circ$, $b = 15$, $a = 7$

b. $\triangle ABC$: $\angle A = 27^\circ$, $b = 23$, $c = 15$

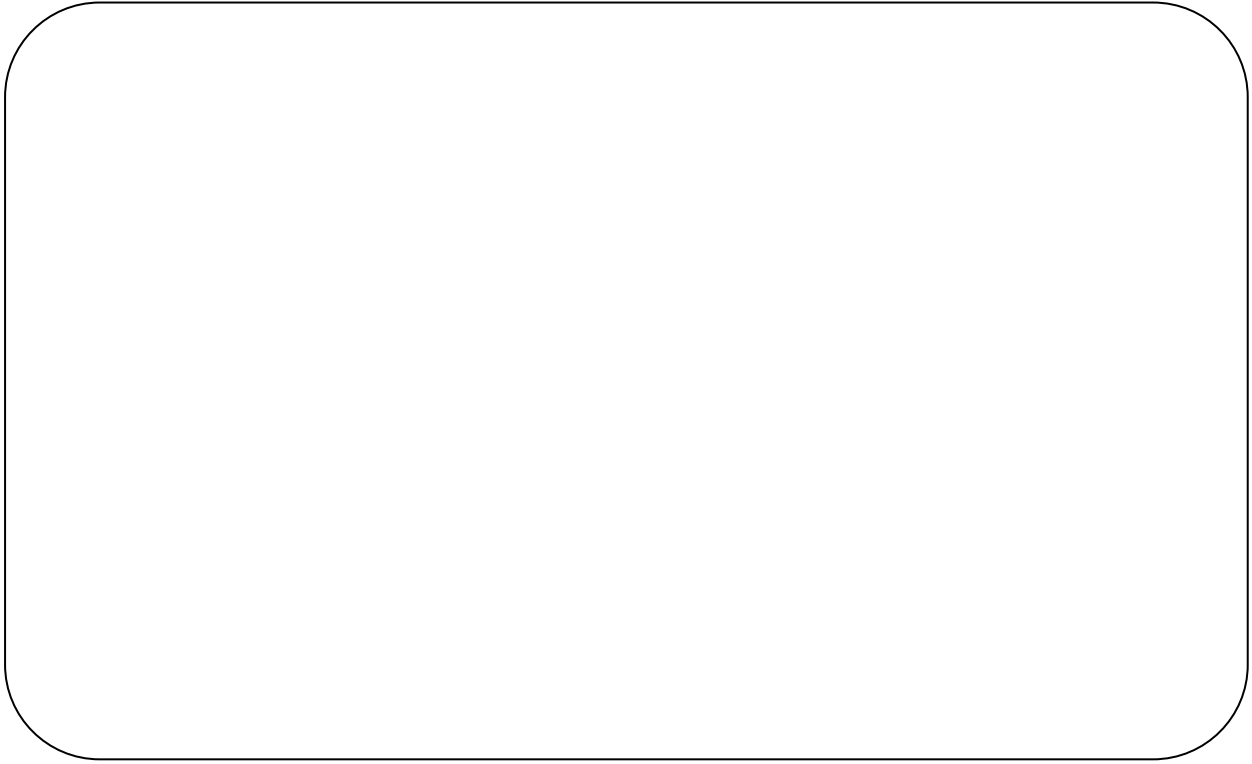
c. $\triangle ABC$: $\angle C = 15^\circ$, $c = 14$, $b = 53$

d. $\triangle ABC$: $\angle B = 45^\circ$, $b = 5$, $a = \sqrt{50}$

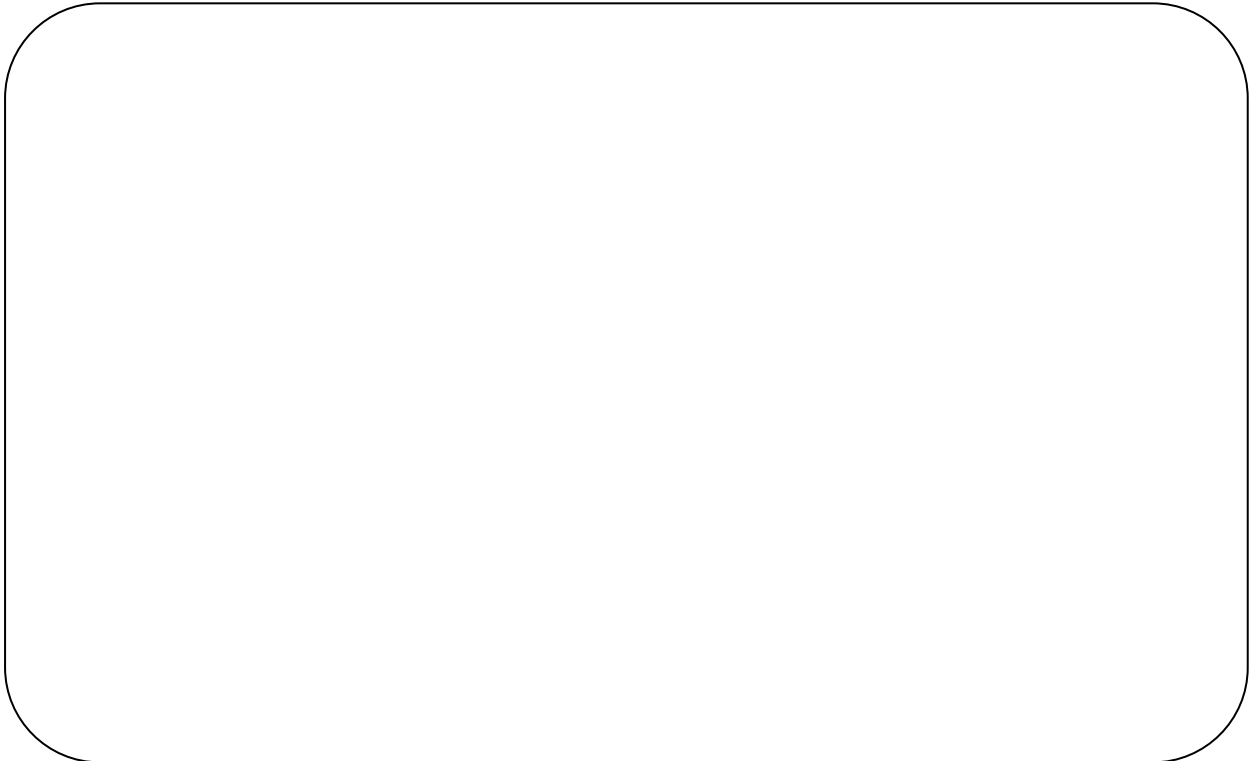
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3. Sketch then solve the following triangles. (If applicable find both possible triangles)

a. $\triangle DEF$: $\angle E = 22^\circ$, $d = 98\text{m}$, $f = 17\text{m}$

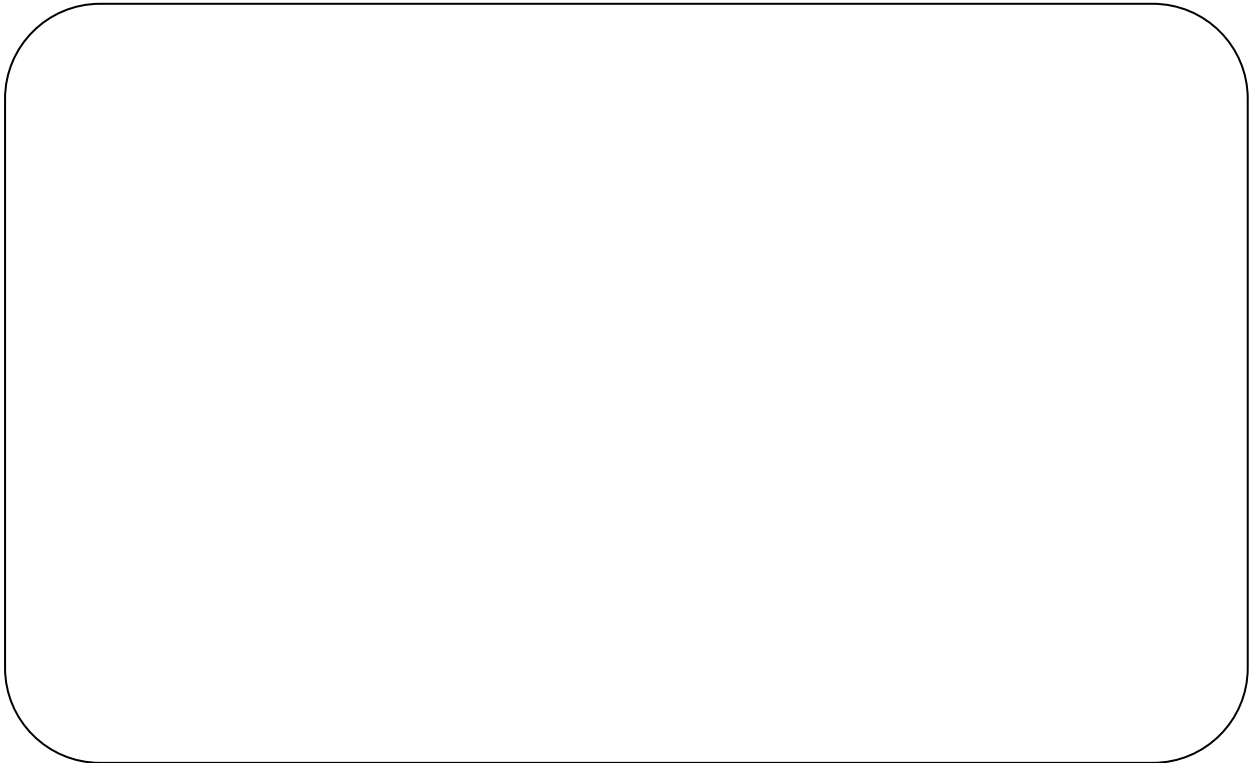


b. $\triangle JKL$: $j = 25\text{ft}$, $k = 13\text{ft}$, $l = 29\text{ft}$

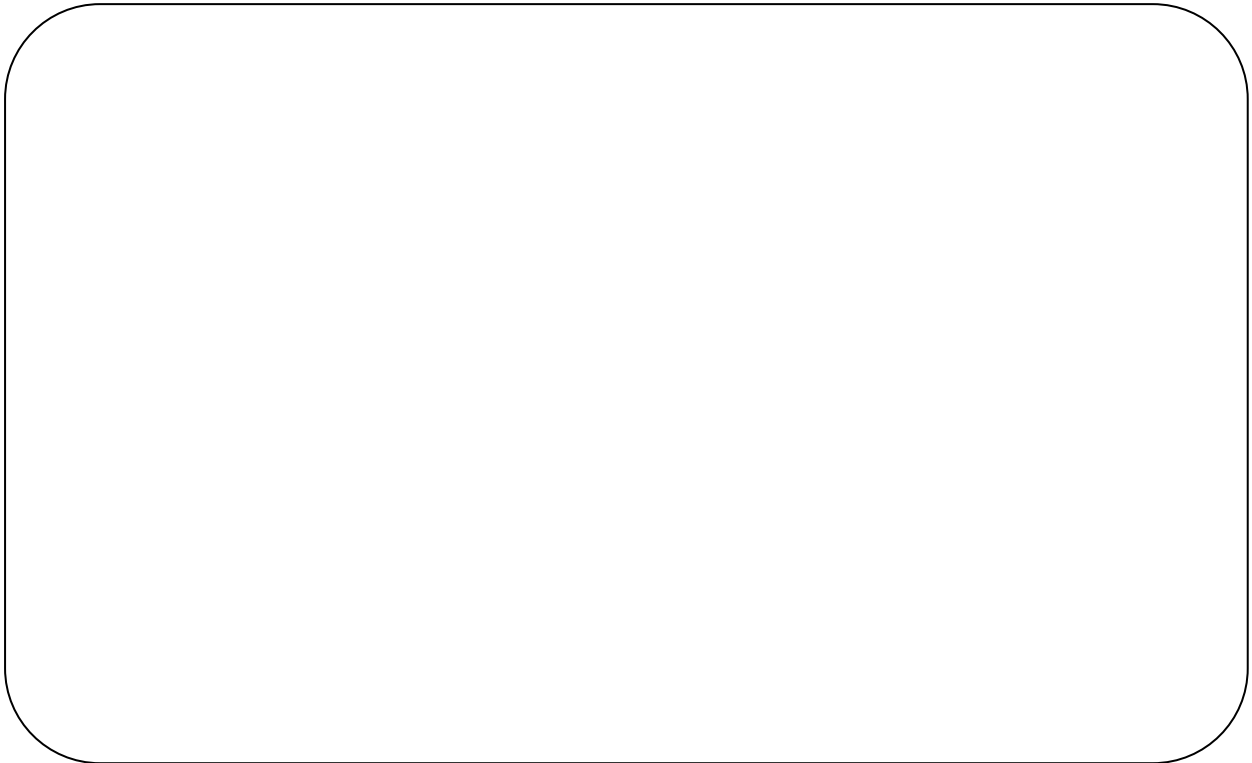


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c. $\triangle ABC$: $\angle A = 19^\circ$, $\angle C = 87^\circ$, $b = 12\text{mm}$



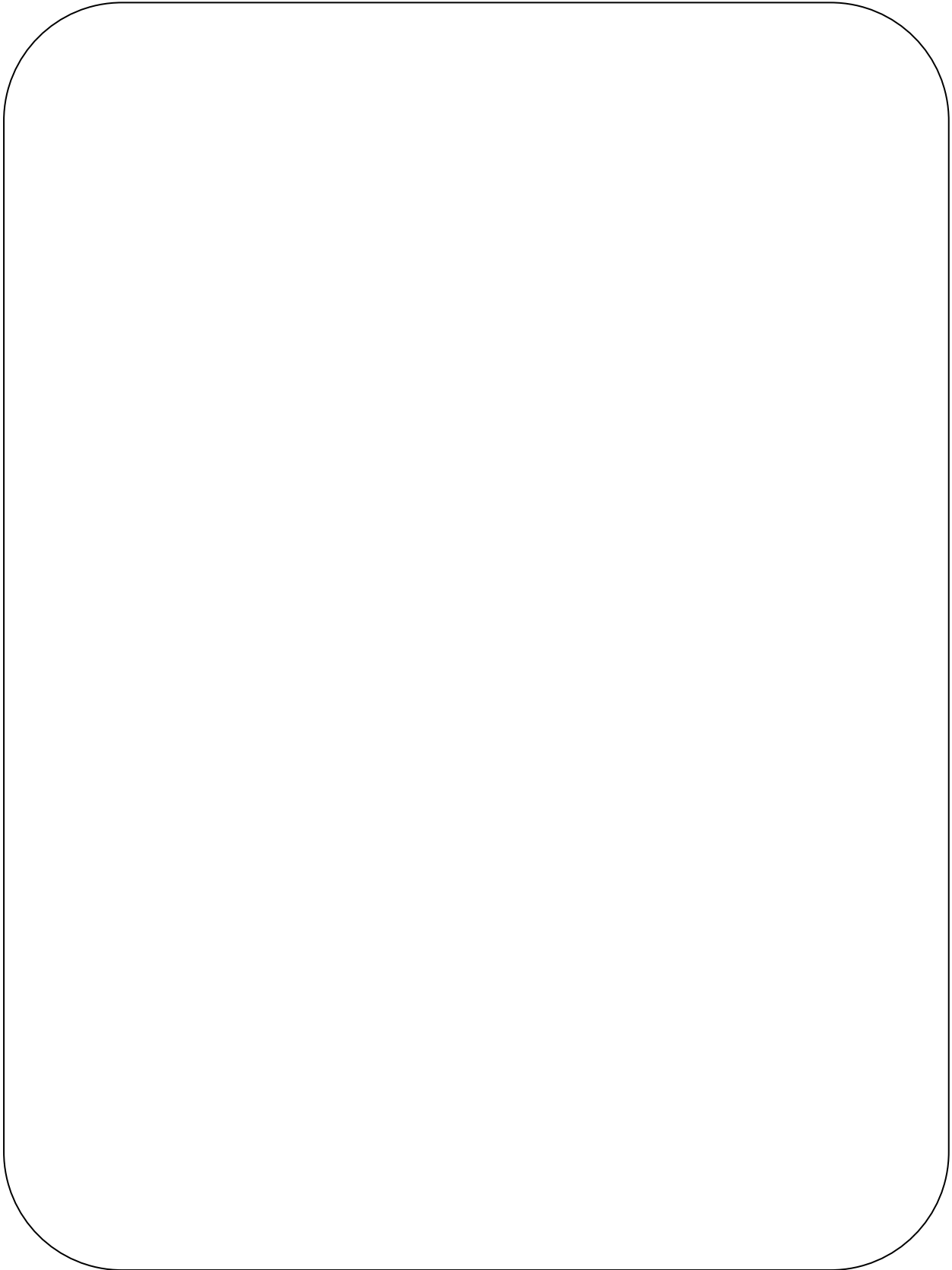
d. $\triangle PQR$: $\angle R = 37^\circ$, $r = 7$, $q = 8$



4. You are staring up at a building, and measure the angle of inclination to the top of the building

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to be 68° . You then walk 120m away, and notice the angle of inclination is now 40° . How tall is the building?



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5. A ship leaves port at a bearing of 128° traveling at 15km/hour for 3 hours. It then turns and travels for another hour and 20 minutes directly south, at a speed of 12km/hour. When it is hit by an iceberg and starts taking on water. If it will sink in 2 hours and 48 minutes, what is the minimum speed a rescue boat leaving from port would have to maintain, in order to arrive before the ship sinks?