

Trig 5.5-5.6

Solve right triangles

Solve triangles using law of sines

Find areas of triangles

Geom. 8.6

law of sines

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

oblique triangle

Quiz Wed. 5.5-5.6

activity: whiteboards

Lesson 5-5 *(Pages 305–312)*

Evaluate each expression. Assume that all angles are in Quadrant I.

1. $\sin\left(\arcsin \frac{3}{4}\right)$

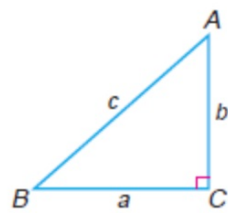
2. $\sec\left(\cos^{-1} \frac{1}{2}\right)$

3. $\cot(\tan^{-1} 1)$

Solve each problem. Round to the nearest tenth.

4. If $a = 38$ and $b = 25$, find A .

5. If $c = 19$ and $b = 17$, find B .



Might not be a right triangle... don't assume...

Lesson 5-6 (Pages 313-318)

Solve each triangle. Round to the nearest tenth.

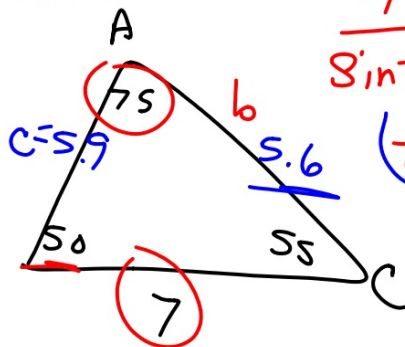
1. $A = 75^\circ, B = 50^\circ, a = 7$

$C = 55^\circ$

$$\frac{1}{\sin 75} = \frac{c}{\sin 55}$$

$$c = \frac{(\sin 55)}{\sin 75}$$

$$= 5.9$$



$$\frac{7}{\sin 75} = \frac{b}{\sin 50}$$

$$(7 \sin 50) = (\sin 75) \cdot b$$

$$\frac{7 \sin 50}{\sin 75} = \frac{(\sin 75) \cdot b}{\sin 75}$$

$$5.6 = b$$

3. $B = 49^\circ$, $C = 32^\circ$, $a = 10$

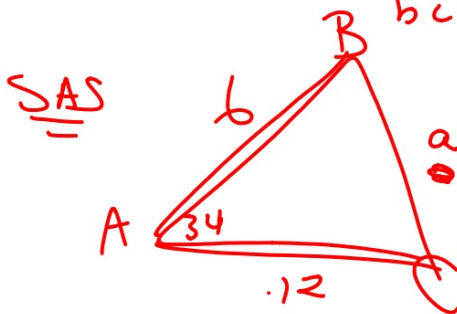
4. $A = 22^\circ$, $C = 41^\circ$, $b = 25$

SAS $K = \frac{1}{2}(ab)\sin(C)$

Find the area of each triangle. Round to the nearest tenth.

5. $A = 34^\circ, b = 12, c = 6$ $ac \sin B$
 $bc \sin A$

6. $B = 56.8^\circ, A = 87^\circ, c = 6.8$

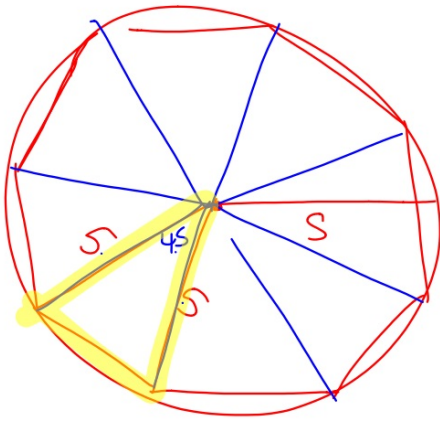


$$K = \frac{1}{2} \cdot 6 \cdot 12 \cdot \sin 34$$

$$\approx 20.1$$

7. $a = 8, B = 60^\circ, C = 75^\circ$

8. $A = 43^\circ, b = 16, c = 12$



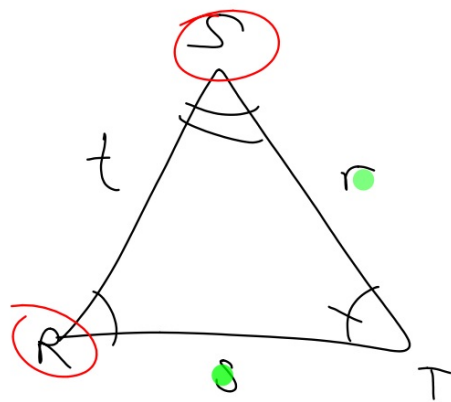
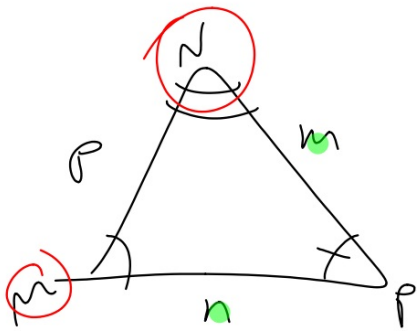
$$8 \left(\frac{1}{2} 5 \cdot 5 \cdot \sin 45 \right)$$

$$8(8.84)$$

$$70.7 \text{ ft}^2$$

$\frac{1}{2} \text{ap}$

29



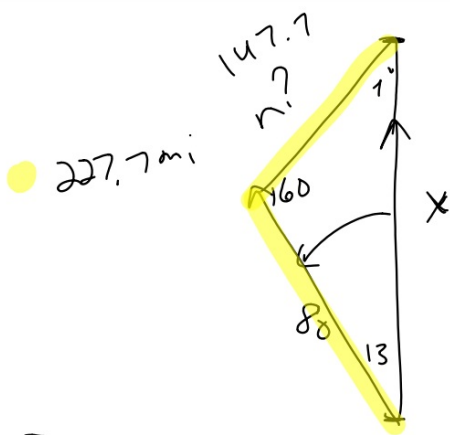
$$\frac{p}{\sin P} = \frac{q}{\sin Q}$$

$$\sin P = \frac{p \sin Q}{q}$$

$$\frac{p \sin Q}{q} = \frac{r \sin S}{s}$$

$$\frac{p}{q} = \frac{r}{s}$$

$$\sin N = \sin S$$



80 + ?
x ?

$$\frac{80}{\sin 7} = \frac{n}{\sin 13}$$

$$n = \frac{80 \sin 13}{\sin 7}$$

$$\frac{80}{\sin 7} = \frac{x}{\sin 160}$$

$$x = \frac{80 \sin 160}{\sin 7}$$

$$x = 224.5 \text{ mi}$$

11-350

WB S. 6
+ 2