

Trig 5.8

Use the law of cosines to solve triangles
Use Hero's formula to find triangle areas

law of cosines

law of sines

semiperimeter $S = \frac{1}{2}P$

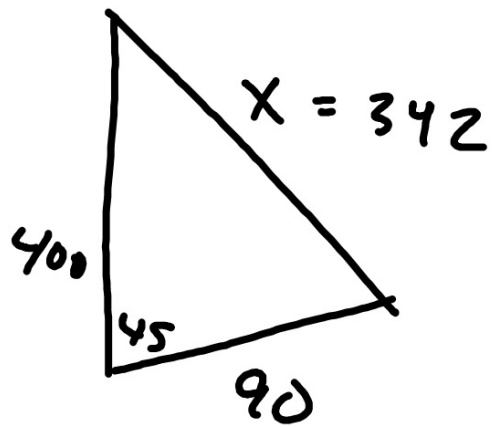
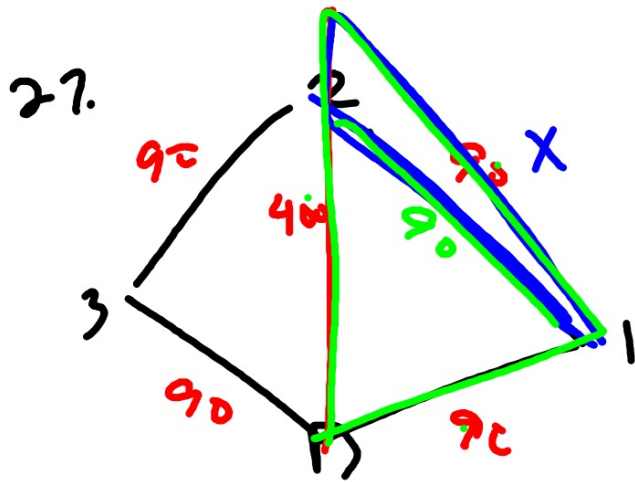
Hero(n)'s formula $\sqrt{S(S-a)(S-b)(S-c)}$

whiteboards

Alligator swamp

Quiz Thurs. 5.7-5.8

Test Fri. Ch. 5



$$X^2 = 400^2 + 90^2 - 2 \cdot 400 \cdot 90 \cdot \cos 45$$

$$X^2 = 117188.3 - 50911.7$$

Solve each triangle. Round to the nearest tenth.

1. $b = 6, c = 8, A = 62^\circ$

3. $B = 48^\circ, c = 18, a = 14$

Heron's formula:
semiperimeter:



Whiteboards

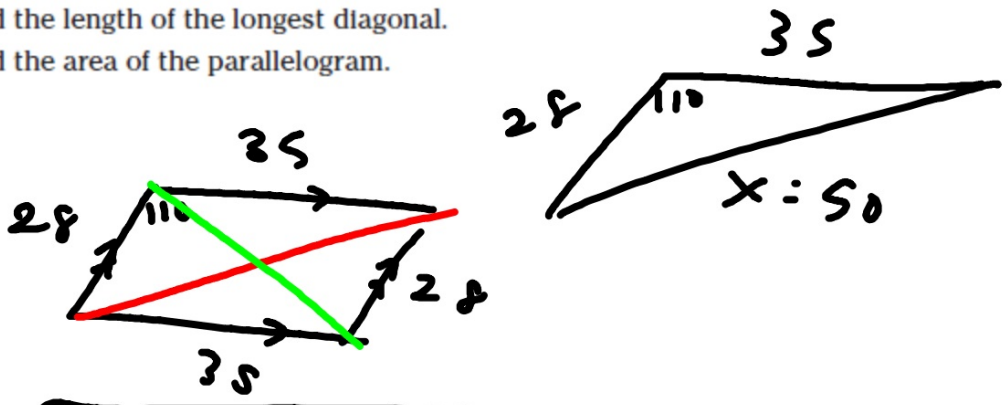
Find the area of each triangle. Round to the nearest tenth.

5. $a = 4, b = 7, c = 10$

6. $a = 4, b = 6, c = 5$

9. **Geometry** The lengths of two sides of a parallelogram are 35 inches and 28 inches. One angle measures 110° .

- a. Find the length of the longest diagonal.
- b. Find the area of the parallelogram.



$$A = \sqrt{56.5(\quad)(\quad)(\quad)}$$

Alligator swamp activ.

You cannot enter the swamp...

How long is the bridge? (scale: 1 m = 1 km)



$$100 \text{ cm} = 1 \text{ km}$$