Trigonometry and Area

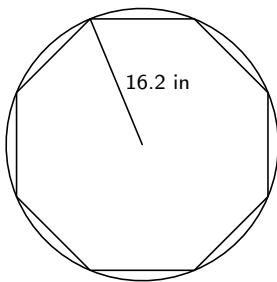**Example 1.** Find the area of each.
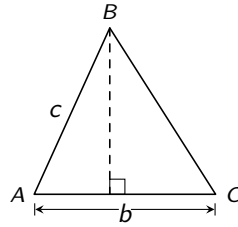
(a)

10 cm

(b)

4 in
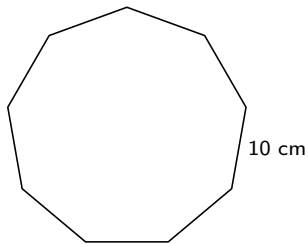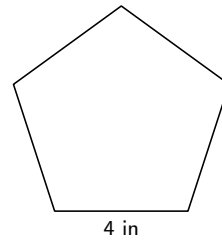
Example 2. A stop sign is a regular octagon. The standard size has a 16.2 in radius. What is the area of the stop sign to the nearest square inch?
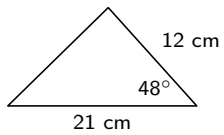

16.2 in

Area of a SAS Triangle
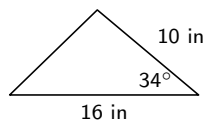
- Area $= \frac{1}{2}bc \times \sin A$

Example 3. Find the area of each triangle. Round your answers to 2 decimal places.

(a)

12 cm

48°

21 cm

(b)

10 in

34°

16 in

Example 4. A tabletop has the shape of a regular decagon with a radius of 9.5 in. What is the area of the tabletop to the nearest square inch?