1. Find the exact area of a regular hexagon whose radius
is 14cm long.

$$A = \frac{1}{2}ap$$
$$= \frac{1}{2}(7\sqrt{3})(84)$$
$$A = 294\sqrt{3}$$
$$cm^2$$

$p = 6 \cdot 14 = 84$

60
30
$7\sqrt{3}$
14
60
7
14
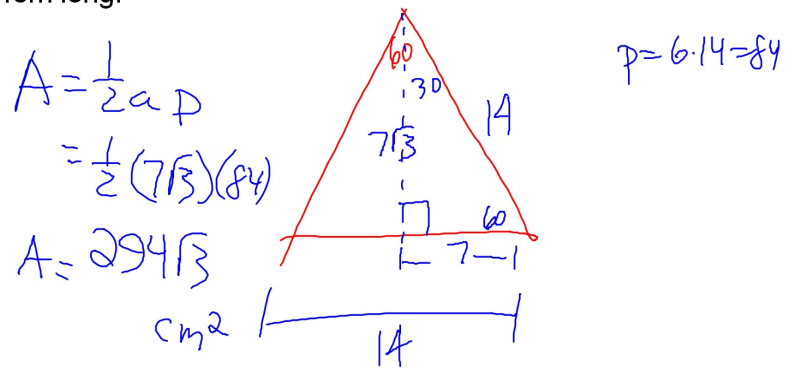
2. Find the exact area of an equilateral triangle whose
sides are each 18 in long.

$$\frac{1}{2}ap$$
$$\frac{1}{2}(3\sqrt{3})(54)$$
$$A = 81\sqrt{3}$$
$$in^2$$

$P = 3(18) = 54$

120°
60
$\frac{9}{\sqrt{3}}$
30
9 = LL

$$\frac{9}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{9\sqrt{3}}{3} = 3\sqrt{3}$$

18
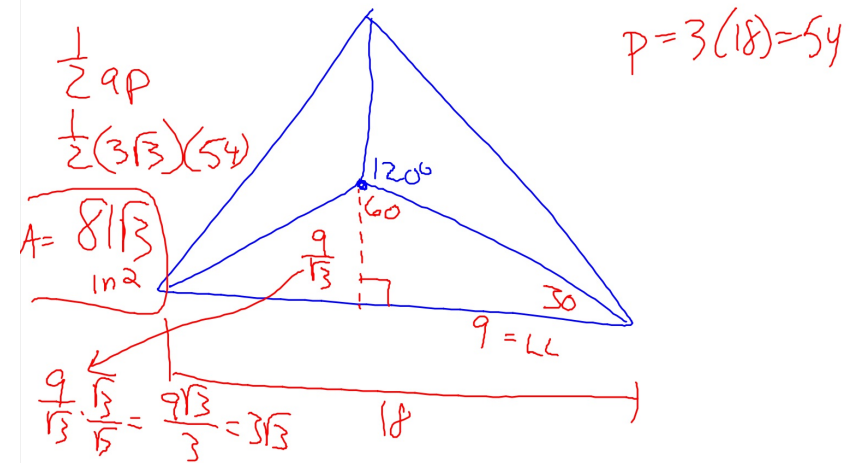
3. Find the area of a square whose apothem
is 15 m long.

$$\frac{1}{2}ap$$
$$\frac{1}{2}(15)(120)$$
$$= 900 \ m^2$$

$P = 4(30)$

15m   45
45
15
30
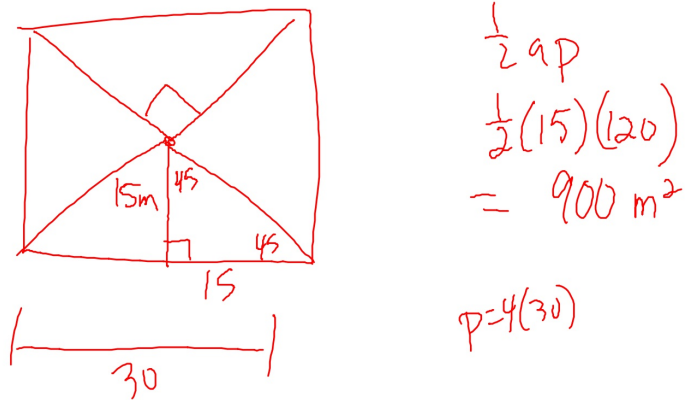
4. Find the length of the apothem of a
regular decagon (10 sides) if the sides are
4 ft. long.

SOHCAHTOA

$$\frac{Tan18°}{1} = \frac{2}{a}$$

$$a = 6.16$$

18°
a
2
4