Find the value of x in each triangle
to the nearest hundredth.
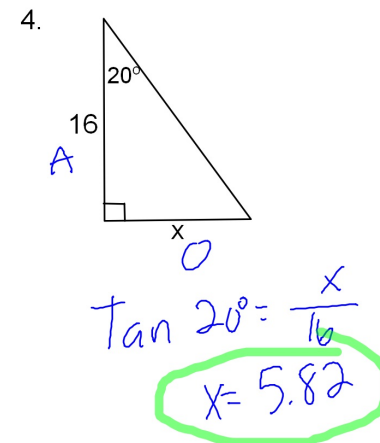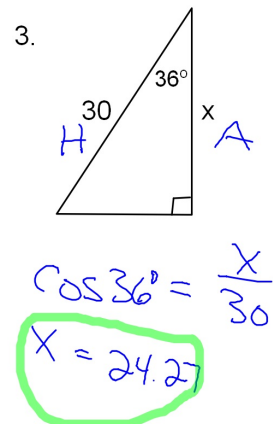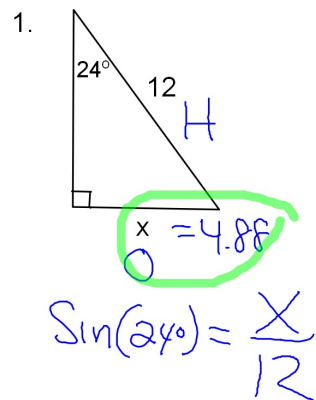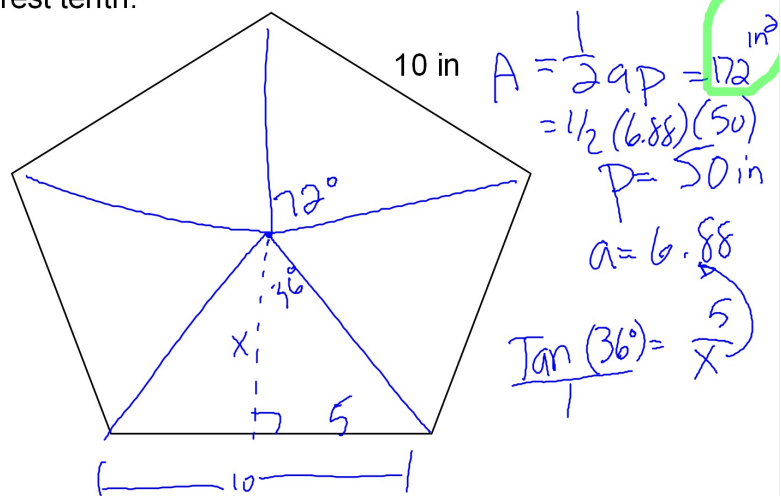
1.
24°   12
H
x =4.88
O
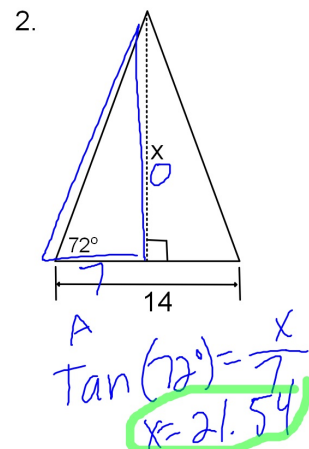$Sin(24°) = \frac{x}{12}$

2.
x
O
72°
7
14
A
$Tan(72°) = \frac{x}{7}$
x= 21.54

3.
36°
30   x
H   A
$Cos 36° = \frac{x}{30}$
X = 24.27

4.
20°
16
A
x
O
$Tan 20° = \frac{x}{16}$
X= 5.82

Find the area of this Regular Pentagon to the
nearest tenth.

10 in
72°
36°
x
5
10

$A = \frac{1}{2}ap = 172$ in²
$= \frac{1}{2}(6.88)(50)$
P= 50 in

a= 6.88

$Tan(36°) = \frac{5}{x}$

Find the area of this Regular Pentagon to the
nearest tenth.

136°
x
10 in
5.88

$cos 36° = \frac{x}{10}$
X= 8.09 → apothem

$A = \frac{1}{2}ap = \frac{1}{2}(8.09)(58.8)$
= 237.87 in²

$Sin 36° = \frac{y}{10}$
Y= 5.88

P= 58.8
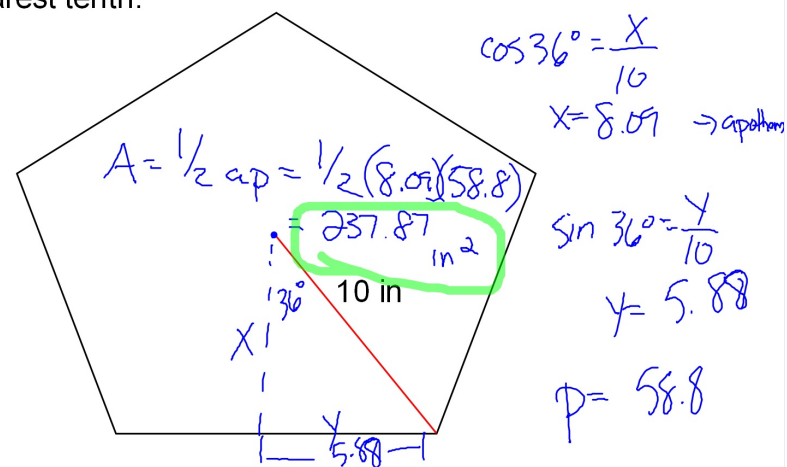
Find the area of this Regular Pentagon to the nearest tenth.

$a = 10$
$P = 72.6$

$A = \frac{1}{2}(10)(72.6)$

363 in^2

10 in
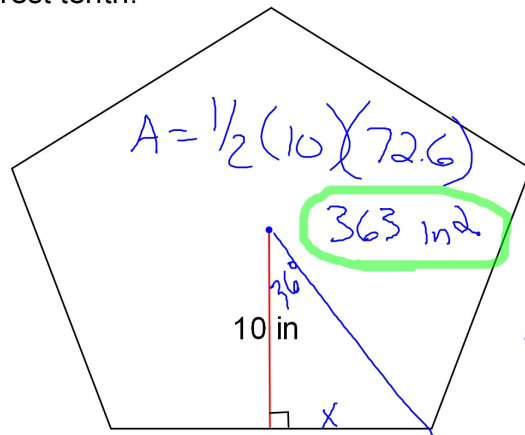
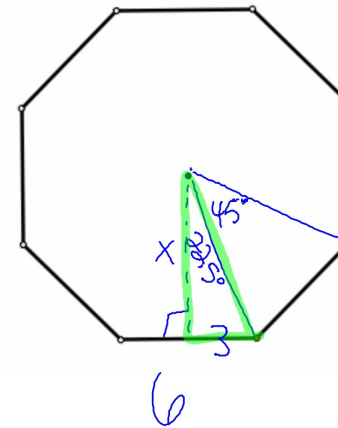$\text{Tan } 36° = \frac{x}{10}$

$7.26 = x$

$P = 72.6$

Find the area of a regular octagon whose Perimeter is 48cm. (sides are 6 cm long)

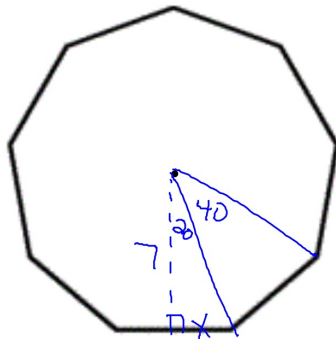$\frac{1}{2}ap = \frac{1}{2}(7.24)(48)$

$= 173.76 \text{ cm}^2$

apothem

$\text{Tan }(22.5) = \frac{3}{x}$

$x = 7.24$

45°

x

22.5°

6

Find the area of a regular nonagon whose apothem is 7 in long.

$\frac{1}{2}ap$

$A = \frac{1}{2}(7)(45.9) = 206.55 \text{ in}^2$

$\text{Tan } 20° = \frac{x}{7}$

$x = 2.55$

$P = 45.9$

40

20°

7

x