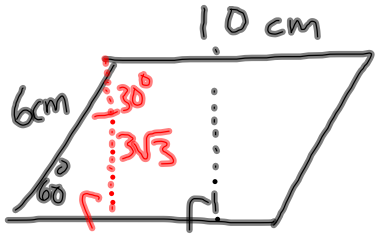
10. $A_{\square} = bh$

$= 1 \cdot 2$

$= 2\ ft^2$

23.



$A_{\square} = bh$

$= 10 \cdot 3\sqrt{3}$

$= 30\sqrt{3}$

$\frac{2x}{2} = \frac{6}{2}$ 10

$x = 3$

6. $A_{Trap} = \frac{1}{2}h(b_1 + b_2)$

$48x + 68 = \frac{1}{2}(8)(b_1 + (9x+12))$

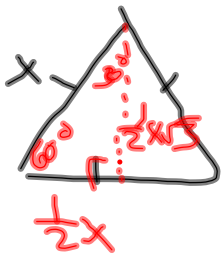
$\frac{48x+68}{4} = \frac{4(b_1 + 9x + 12)}{4}$

$12x + 17 = b_1 + 9x + 12$

$-9x \quad -12 \qquad -9x \quad -12$

$3x + 5 = b_1$

26.



$A = \frac{1}{2}bh$

$A = \frac{1}{2} \times \left(\frac{1}{2}x\sqrt{3}\right)$

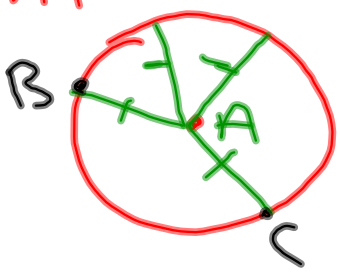
$= \frac{x^2\sqrt{3}}{4}$

0-4 +

5-8 ✓

9.2 Circles & regular polygons

circle: locus of pts. that are equidistant from the center.

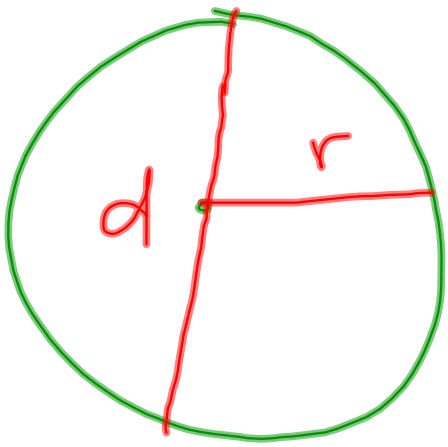


Circumference:

Distance around the circle
(Perimeter)

$C = 2\pi r$ or πd

$C = \pi \cdot d$ or $C = 2\pi r$



$A = \pi r^2$

The area of $\odot K$ in terms π.

$A = \pi r^2$

$A = \pi(3)^2$

$A = 9\pi \ m^2$

the radius of $\odot J$ if the circumference is $(65x+14)\pi$ ft.

$$C = 2\pi r$$

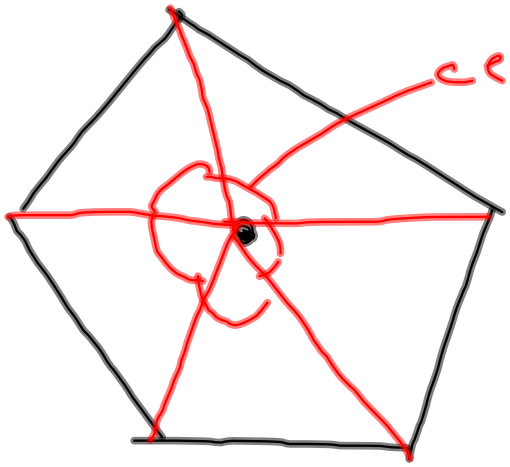
$$\frac{(65x+14)\pi}{2\pi} = \frac{2\pi r}{2\pi}$$

$$\frac{65x+14}{2} = r$$

the circumference of $\odot M$ if the Area is $25\pi x^2$ m^2.

Apothem: distance from the center of a polygon to the side.

Central angle: vertex is the center and sides pass through consecutive vertices



central ∠ of a regular n-gon is $\frac{360}{n}$.

Area of a regular polygon

$$A = \frac{1}{2} a P$$

a = apothem

P = perimeter

Area of a regular heptagon with side length of 2 ft.

$P = 2 \cdot 7 = 14$ ft

central $\angle = \frac{360}{7} = 51.$

$\tan 25.5 = \frac{1}{a}$

$a \tan 25.5 = 1$

$\frac{a \tan 25.5}{\tan 25.5} = \frac{1}{\tan 25.5}$

$a = 2.09$

$A = \frac{1}{2} a P$

$A = \frac{1}{2}(2.09)(14)$

$A = 14.63 \text{ ft}^2$

dodecagon with apothem length of 4.

Hw: p. 603

2-32 even

odds extra credit