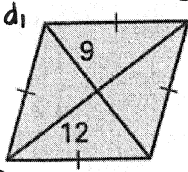
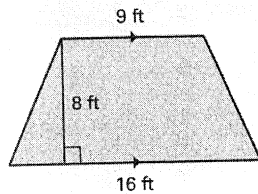
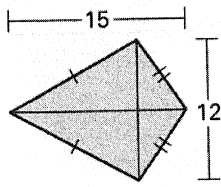
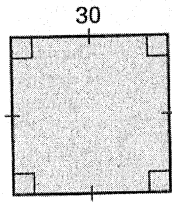


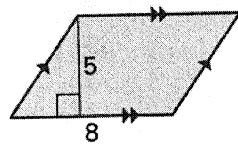
Find the area of the figure- label your answers.

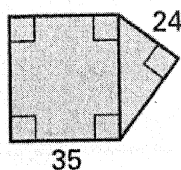
1. 
 $d_1 = 18$
 $d_2 = 24$
 $A = \frac{18 \cdot 24}{2}$
 $A = 216 \text{ units}^2$

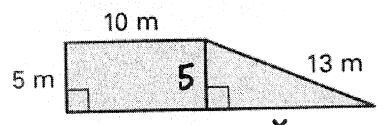
2. 
 $A = \frac{(9+16)8}{2}$
 $A = 100 \text{ ft}^2$

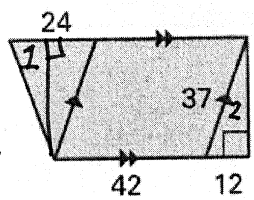
3. 
 $A = \frac{15 \cdot 12}{2}$
 $A = 90 \text{ units}^2$

4. 
 $A = 30^2$
 $A = 900 \text{ units}^2$

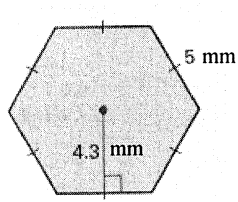
5. 
 $A = 5 \cdot 8$
 $A = 40 \text{ units}^2$

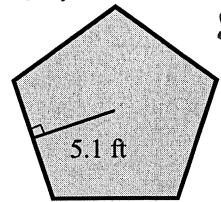
6. 
 $A_{\square} = 40 \cdot 35 = 1400$
 $A_{\Delta} = \frac{24 \cdot 32}{2} = 384$
 $A = 1400 + 384 = 1784 \text{ u}^2$
 $24^2 + h^2 = 40^2$
 $-24^2 \quad -24^2$
 $\sqrt{h^2} = \sqrt{1024}$
 $h = 32$

7. 
 $A_{\square} = 5 \cdot 10 = 50$
 $A_{\Delta} = \frac{5 \cdot 12}{2} = 30$
 $A = 50 + 30 = 80 \text{ m}^2$
 $5^2 + x^2 = 13^2$
 $-5^2 \quad -5^2$
 $\sqrt{x^2} = \sqrt{144}$
 $x = 12$

8. 
 $A_{\Delta} = \frac{24 \cdot 35}{2} = 420 \text{ u}^2$
 $A_{\square} = 42 \cdot 35 = 1470 \text{ u}^2$
 $A_{\Delta} = \frac{12 \cdot 35}{2} = 210 \text{ u}^2$
 $A = 420 + 1470 + 210 = 2100 \text{ u}^2$
 $12^2 + h^2 = 37^2$
 $-12^2 \quad -12^2$
 $\sqrt{h^2} = \sqrt{1225}$
 $h = 35$

Find the area of the figure. Round to the measures to the nearest hundredth if necessary and label your answers.

13. 
 $a = 4.3$
 $P = 5 \cdot 6 = 30$
 $A = \frac{4.3(30)}{2}$
 $A = 64.5 \text{ mm}^2$

14. 
 $\frac{360}{5} = 72^\circ$
 $\frac{72}{2} = 36$
 $\tan 36 = \frac{x}{5.1}$
 $5.1 \tan 36 = x$
 $3.71 = x$
 $P = 5(7.42) = 37.1$
 $A = \frac{5.1(37.1)}{2}$
 $A = 94.61 \text{ ft}^2$

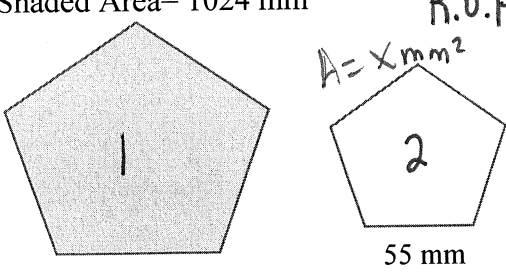
15. $\frac{360}{8} = 45^\circ$
 $\frac{45}{2} = 22.5^\circ$
 $A = 14.49(96)$
 $A = 695.52 \text{ cm}^2$
 $\tan 22.5^\circ = \frac{6}{a}$
 $a \cdot \tan 22.5 = \frac{6}{\tan 22.5}$
 $a = 14.49 \text{ cm}$
 $P = 8 \cdot 12 = 96 \text{ cm}$

16. $\frac{360}{7} = 51.43$
 $\frac{51.43}{2} = 25.72^\circ$
 $A = 5.41(36.4)$
 $A = 98.46 \text{ in}^2$
 $\cos 25.72 = \frac{x}{6}$
 $6 \cos(25.72) = a$
 $5.41 = a$
 $\sin 25.72 = \frac{x}{6}$
 $6 \sin 25.72 = x$
 $2.60 = x$
 $\text{side} = 2.6 \times 2 = 5.2$
 $P = 5.2(7) = 36.4$

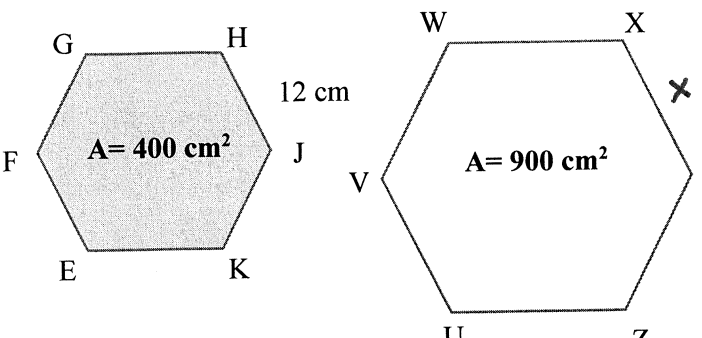
19. Complete the table of ratios for similar polygons.

Ratio of corresponding side lengths	Ratio of Perimeters	Ratio of Areas
1:9	1:9	1:81
35:50 = 7:10	35:50	49:100
12:5	12:5	144:25
2:3	$\sqrt{12} : \sqrt{27} = 2\sqrt{3} : 3\sqrt{3} = 2:3$	12:27 = 4:9

20. Corresponding lengths in similar figures are given. Find the ratios (shaded to unshaded) of the perimeters and areas. Find the unknown area. Round to the measures to the nearest hundredth if necessary and label your answer.

Shaded Area = 1024 mm²

 $R.O.P = \frac{88}{55} = \frac{8}{5}$ R.O.P
 $R.O.A = \frac{8^2}{5^2} = \frac{64}{25}$ R.O.A
 $\frac{64}{25} = \frac{1024}{x}$
 $\frac{64x}{64} = \frac{25600}{64}$
 $x = 400$
 $A = 400 \text{ mm}^2$

21. If EFGHJK ~ UVWXYZ, then use the given area to find XY. Round to the measures to the nearest hundredth if necessary and label your answer.


 $R.O.A = \frac{400}{900} = \frac{4}{9}$
 $R.O.P = \frac{\sqrt{4}}{\sqrt{9}} = \frac{2}{3}$
 $\frac{2}{3} = \frac{12}{x}$
 $\frac{2x}{2} = \frac{36}{2}$
 $x = 18 \text{ cm}$

Find the indicated measure. Round to the measures to the nearest hundredth if necessary and label your answer.

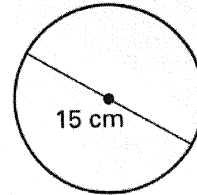
22. Find the circumference and area

Exact Circumference = 15π cm

Approx. Circumference ≈ 47.12 cm

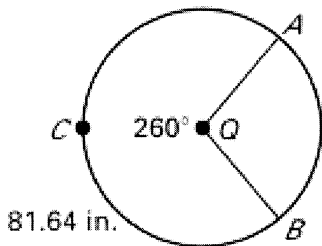
Exact Area = $7.5^2\pi = 56.25\pi$ cm²

Approx. Area ≈ 176.71 cm²



$r = 7.5$

28. Use $\odot Q$ to find the indicated measures. Round to the measures to the nearest hundredth if necessary and label your answers.



a.) $m\widehat{ACB} = 260^\circ$

b.) $\text{Arc Length } \widehat{ACB} = 81.64$ in

c.) Radius of $\odot Q$

d.) $m\widehat{AB} = 360 - 260$

$$\frac{81.64}{2\pi r} = \frac{260}{360}$$

$m\widehat{AB} = 100^\circ$

$$\frac{29390.4}{(520\pi)} = \frac{520\pi r}{(520\pi)}$$

$r \approx 17.99$ in

e.) $\text{Arc Length } \widehat{AB} = \frac{100}{360} \cdot 2\pi(17.99)$

f.) Circumference of $\odot Q$

g.) Area of $\odot Q$

$$\frac{360x}{360} = \frac{11303.45}{360}$$

$C = 2\pi(17.99)$

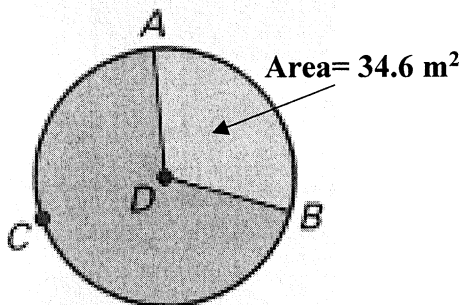
$A = \pi(17.99)^2$

$x = 31.40$ in

$C = 113.03$ in

$A \approx 1016.75$ in²

29. The area of $\odot D$ is 113.1 m². The area of sector ADB is 34.6 m². Find the indicated measure. Round to the measures to the nearest hundredth if necessary and label your answers.



Area of $\odot D$ is 113.1 m²
Circle

a.) Radius of $\odot D$

b.) Circumference of $\odot D$

$$\frac{113.1}{\pi} = \frac{\pi r^2}{\pi}$$

$C = 2\pi r$

$$\sqrt{36} = \sqrt{r^2} \quad r = 6$$
 m

$C = 37.70$ m

c.) $m\widehat{AB}$

d.) Length of $\widehat{ACB} = 360 - 110.13 =$

$$\frac{34.6}{113.1} = \frac{m\widehat{AB}}{360}$$

$$\frac{\text{Length of } \widehat{ACB}}{37.70} = \frac{249.87}{360}$$

$$\frac{12456}{113.1} = \frac{113.1(m\widehat{AB})}{113.1}$$

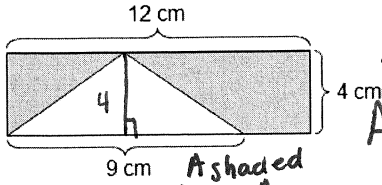
$$\frac{360x}{360} = \frac{9420.10}{360}$$

$110.13^\circ = m\widehat{AB}$

$x = 26.17$ m

Find the area of the shaded region. Then find the probability that a point randomly chosen in the figure lies in the shaded region. Round to the measures to the nearest hundredth if necessary and label your answers.

30.



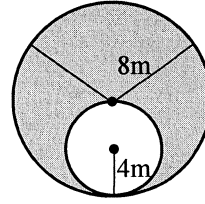
$$A_{\square} = 12 \cdot 4 = 48 \text{ cm}^2$$

$$A_{\Delta} = \frac{9 \cdot 4}{2} = 18 \text{ cm}^2$$

$$P_{\text{shaded}} = \frac{A_{\square} - A_{\Delta}}{A_{\square}} = \frac{48 - 18}{48} = \frac{30}{48}$$

$$A_{\text{shaded}} = 30 \text{ cm}^2$$

31.



$$A_{\text{large}} = \pi 8^2 \approx 201.06$$

$$A_{\text{small}} = \pi 4^2 = 50.27$$

$$P_{\text{shaded}} = \frac{64\pi - 16\pi}{64\pi} = \frac{48\pi}{64\pi} = \frac{3}{4}$$

$$A_{\text{shaded}} = 48\pi$$

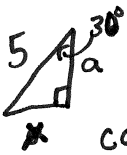
$$A_{\text{shaded}} \approx 150.80 \text{ m}^2$$

$$P_{\text{shaded}} = .75 = \boxed{75\%}$$

$$P_{\text{shaded}} = .625$$

$$\boxed{62.5\%}$$

$$32. \frac{360}{6} = 60$$



$$\cos 30 = \frac{a}{5}$$

$$5 \cos 30 = a$$

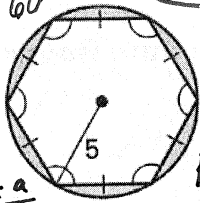
$$4.33 = a$$

$$\sin 30 = \frac{x}{5}$$

$$5 \sin 30 = x$$

$$2.5 = x$$

$$\text{side} = 2.5(2) = 5 \quad P = \frac{5(6)}{30} = 1$$



$$A_{\text{hex}} = \frac{1}{2} \cdot 6 \cdot 5^2$$

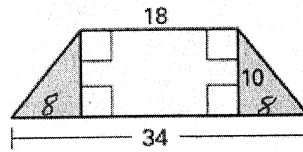
$$A_{\text{shaded}} = 13.59 \text{ u}^2$$

$$P_{\text{shaded}} = \frac{13.59}{25\pi}$$

$$P_{\text{shaded}} = .173 = \boxed{17.3\%}$$

$$A_{\text{hex}} = \frac{4.33(30)}{2} = 64.95$$

34.



$$A_{\text{trap}} = \frac{(18+34)10}{2}$$

$$= 260 \text{ u}^2$$

$$P_{\text{shaded}} = \frac{A_{\text{trap}} - A_{\square}}{A_{\text{trap}}} = \frac{A_{\text{shaded}}}{A_{\text{trap}}}$$

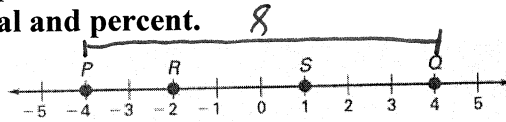
$$\frac{260 - 180}{260} = \frac{80}{260} = \frac{4}{13}$$

$$P_{\text{shaded}} = .3077$$

$$= \boxed{30.77\%}$$

$$A_{\text{shaded}} = 80 \text{ u}^2$$

Find the probability that a point k, selected randomly on \overline{PQ} , is on the given segment. Express your answer as a fraction, decimal and percent.



36. \overline{RS}

$$P(\overline{RS}) = \frac{3}{8}$$

$$\frac{3}{8}, .375, 37.5\%$$

37. \overline{PQ}

$$P(\overline{PQ}) = \frac{8}{8} = 1$$

$$\frac{1}{1}, 100\%, 1.0$$

38. \overline{PS}

$$P(\overline{PS}) = \frac{5}{8}$$

$$\frac{5}{8}, .625, 62.5\%$$

39. \overline{RQ}

$$P(\overline{RQ}) = \frac{6}{8} = \frac{3}{4}$$

$$\frac{3}{4}, .75, 75\%$$