

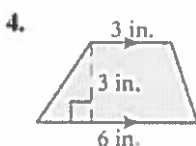
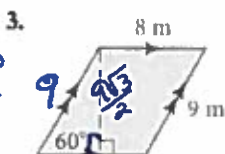
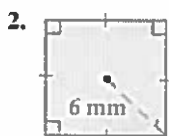
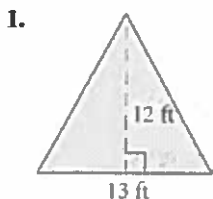
Test Review
Area and Perimeter (1.9 and Chapter 10)

Name: *Key*

Page 592: #1-6, 9-12, 22-24
 Page 65: #27-32
 Page 73: #39-44
 Page 590: #6-14, 19-25, 34-36

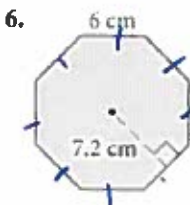
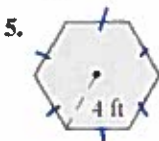
Page 592: #1-6, 9-12, 22-24

Find the area of each figure. If your answer is not an integer, round to the nearest tenth.

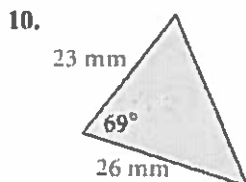
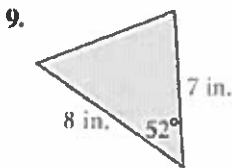


$$\begin{array}{r} 30 \times \\ 4.5 \times \\ \hline 135 \\ 90 \\ \hline 225 \end{array}$$

Find the area of each regular polygon. Round to the nearest tenth.



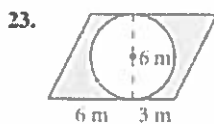
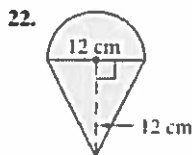
Find the area of each polygon to the nearest tenth.



11. a regular hexagon with apothem 5 ft

12. a regular pentagon with radius 3 cm

Find the area of each shaded region. Leave your answers in terms of π .



24. Probability Every 20 minutes from 4:00 P.M. to 4:30 P.M., a commuter train crosses Main Street. For three minutes a gate stops cars from passing as the train goes by. What is the probability that a motorist approaching the train crossing during this time interval will have to stop for the train?

Rain: 27 mins total

4-7pm total 180 mins

$$\frac{27}{180} = \frac{3}{20} = 15\%$$

① $A = \frac{1}{2}bh$
 $A = \frac{1}{2}(12)(13)$
 $A = 78 \text{ ft}^2$

② $A = \frac{1}{2}bc \sin A \times 4$
 $A = \frac{1}{2}(6)(6) \sin 90 \times 4$
 $A = 72 \text{ mm}^2$

③ $A = b \cdot h$
 $A = (8)(9\sqrt{3})$
 $A = (8)(4.5\sqrt{3})$
 $A = 62.4 \text{ m}^2$

④ $A = \frac{1}{2}h(b_1 + b_2)$
 $A = \frac{1}{2}(3)(3 + 6)$
 $A = 13.5 \text{ in}^2$

⑤
 $A = \frac{1}{2}bc \sin A \times 6$
 $A = \frac{1}{2}(4)(4) \sin 60 \times 6$
 $A = 41.6$

⑥ $A = \frac{1}{2}ap$
 $A = \frac{1}{2}(7.2)(6 \times 8)$
 $A = 172.8 \text{ cm}^2$

⑨ $A = \frac{1}{2}bc \sin A$
 $A = \frac{1}{2}(8)(7) \sin 52$
 $A = 22.1 \text{ in}^2$

⑩ $A = \frac{1}{2}bc \sin A$
 $A = \frac{1}{2}(23)(26) \sin 69$
 $A = 279.1 \text{ mm}^2$

⑪
 $A = \frac{1}{2}ap$
 $A = \frac{1}{2} \left(\frac{5\sqrt{3}}{3} \right) \left(\frac{10\sqrt{3}}{3} \cdot 6 \right)$
 $A = 86.6 \text{ ft}^2$

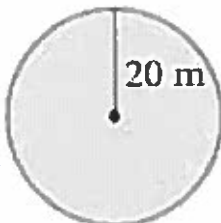
⑫ $A = \frac{1}{2}ap$

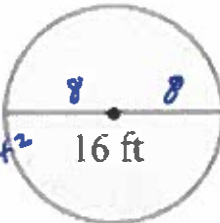
 $A = \frac{1}{2}(3)(3) \sin 72 \times 5$
 $A = 21.4 \text{ cm}^2$

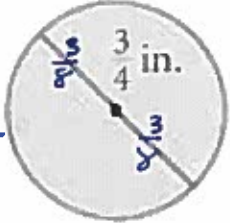
⑫ $\frac{1}{2}A_0 + A_0$
 $\frac{1}{2}(\pi(6)^2) + \frac{1}{2}(12)(12)$
 $18\pi + 72 \text{ cm}^2$

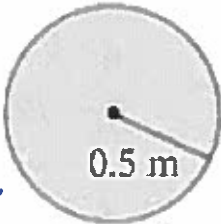
⑬ $A_{\text{para}} - A_0$
 $A = b \cdot h - \pi r^2$
 $9(6) - \pi(3)^2$
 $54 - 9\pi \text{ m}^2$

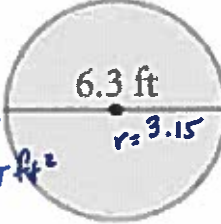
Find the area of each circle in terms of π .

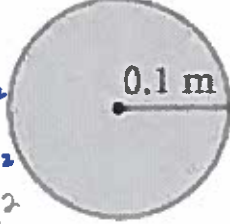
27.  $A = \pi r^2$
 $A = \pi (20)^2$
 $A = 400\pi \text{ m}^2$

28.  $A = \pi r^2$
 $A = \pi (8)^2$
 $A = 64\pi \text{ ft}^2$


29.  $A = \pi r^2$
 $A = \pi (\frac{3}{8})^2$
 $A = \frac{9}{64}\pi \text{ in}^2$


30.  $A = \pi r^2$
 $A = \pi (0.5)^2$
 $A = 0.25\pi \text{ m}^2$

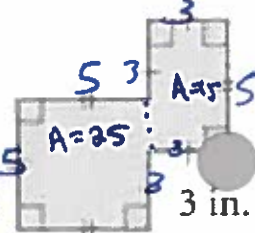
31.  $A = \pi r^2$
 $A = \pi (3.15)^2$
 $A = 9.9225\pi \text{ ft}^2$

32.  $A = \pi r^2$
 $A = \pi (0.1)^2$
 $A = 0.01\pi \text{ m}^2$

Find the perimeter and the area of each figure.

39.  $A = 64 \text{ cm}^2$
 $P = 32 \text{ cm}$

40.  $A = 78 \text{ ft}^2$
 $P = 38 \text{ ft}$

41.  $A = 40 \text{ in}^2$
 $P = 32 \text{ in}$

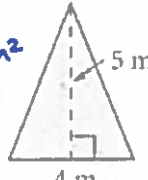
Find the circumference and the area of each circle to the nearest hundredth.


42. $r = 3 \text{ in.}$
 $C = 6\pi \text{ in} = 18.85$
 $A = 9\pi \text{ in}^2 = 28.27$

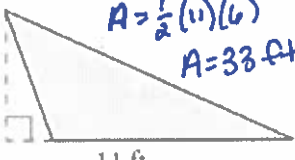
43. $d = 15 \text{ m}$
 $C = 15\pi \text{ m} = 47.12$
 $A = 56.25\pi \text{ m}^2 = 176.71$
 $r = 7.5 \text{ m}$

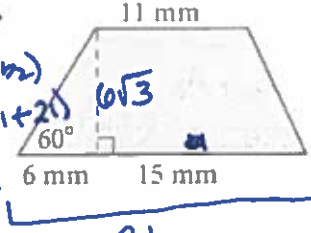
44. $r = 26 \text{ m}$
 $C = 52\pi \text{ m} = 163.36$
 $A = 676\pi \text{ m}^2 = 2123.72$

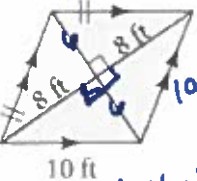
Find the area of each figure. If your answer is not an integer, leave it in simplest radical form.

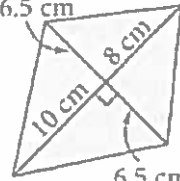
6.  $A = \frac{20 \text{ m}^2}{2}$
 $A = 10 \text{ m}^2$

7.  $A = 90 \text{ in}^2$

8.  $A = \frac{1}{2}(11)(6)$
 $A = 33 \text{ ft}^2$


9.  $A = \frac{1}{2}h(b_1 + b_2)$
 $A = \frac{1}{2}(6\sqrt{3})(6 + 15)$
 $A = 90\sqrt{3} \text{ mm}^2$

10.  $A = \frac{1}{2}(d_1)(d_2)$
 $A = \frac{1}{2}(12)(10)$
 $A = 60 \text{ ft}^2$

11.  $A = \frac{1}{2}d_1 \cdot d_2$
 $A = \frac{1}{2}(10)(13)$
 $A = 65 \text{ cm}^2$

Sketch each regular polygon with the given radius. Then find its area. Round your answers to the nearest tenth.

12. triangle; radius 4 in.




$$A = \frac{1}{2}(4)(4)\sin 120 \times 3$$

$$A = \cancel{20.8} \text{ in}^2$$

$$A = 20.8$$


13. square; radius 8 mm



$$A = \frac{1}{2}(8)(8) \times 4$$

$$A = 128 \text{ mm}^2$$

14. hexagon; radius 7 cm



$$A = \frac{1}{2}(7)(7)\sin 60 \times 6$$

$$A = 127.3 \text{ cm}^2$$

Find the area of each polygon. Round your answers to the nearest tenth.

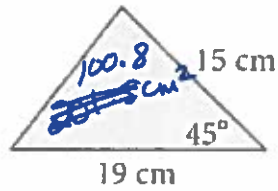
19. regular decagon with radius 5 ft

20. regular pentagon with apothem 8 cm

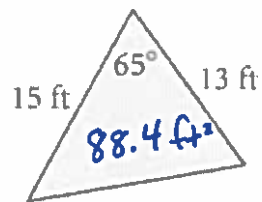
21. regular hexagon with apothem 6 in.

22. regular quadrilateral with radius 2 m

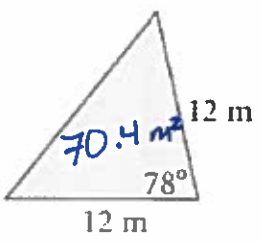
23.




24.



25.



19.

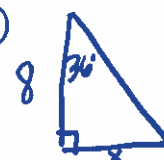


$$360 \div 10 = 36$$

$$A = \frac{1}{2}(5)(5)\sin 36 \times 10$$

$$A = 73.5 \text{ ft}^2$$

20.



$$360 \div 5 = 72 \div 2 = 36$$

$$\tan 36 = \frac{x}{8}$$


$$x = 5.8123$$

$$\text{Side} = 2x = 11.6247$$

$$A = \frac{1}{2}(8)(11.6247 \times 5)$$

$$A = 232.5 \text{ cm}^2$$

21.



$$360 \div 6 \div 2 = 60 \div 2 = 30$$

$$\tan 30 = \frac{x}{6} \quad x = 3.4641$$


$$\text{side} = 2x = 6.9282$$

$$A = \frac{1}{2}(6)(6.9282) \left(\frac{6}{\text{sides}} \right)$$

$$A = \cancel{20.8} \text{ in}^2$$

$$A = 124.7 \text{ in}^2$$

22.

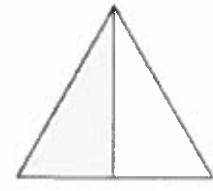


$$A = \frac{1}{2}(2)(2)\sin 90 \times 4$$

$$A = 8 \text{ m}^2$$

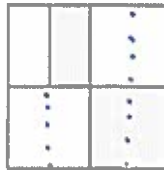
A dart hits each dartboard at a random point. Find the probability that it lands in the shaded area.

34.



$$\frac{1}{2} = 50\%$$


35.



$$\frac{3}{4} = 37.5\%$$

$$38\%$$

36.



$$\frac{60}{360} = \frac{1}{6} \approx 17\%$$

