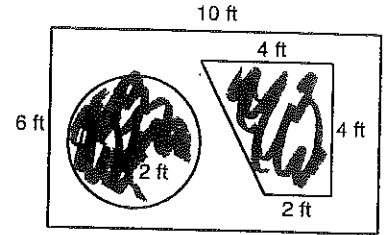
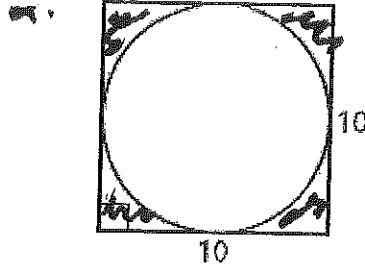
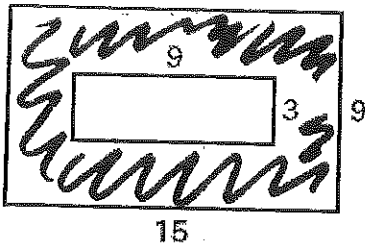


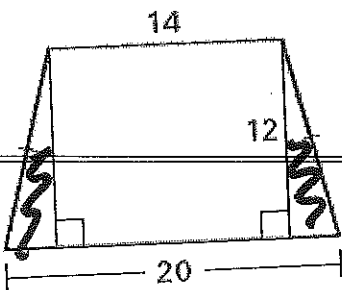
For problems 1-9, find

- The area of the shaded region
- The probability of that a point chosen at random lies in the shaded area. Find the SIMPLIFIED EXACT VALUE as well the APPROXIMATION (to 3 decimal places when necessary.)
(Assume that figures that appear regular are regular)

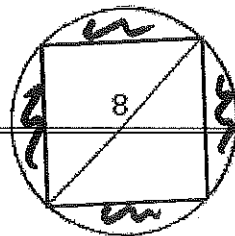
1.



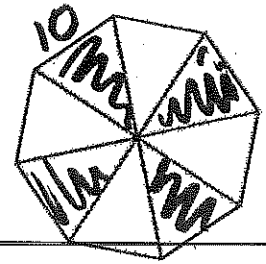
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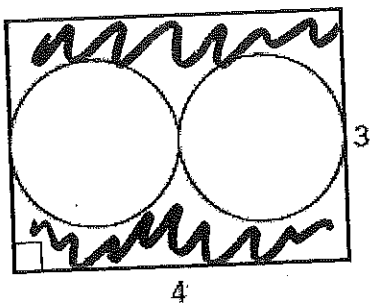
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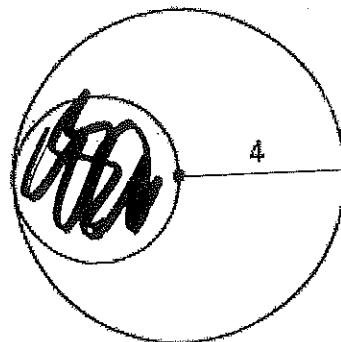
6.



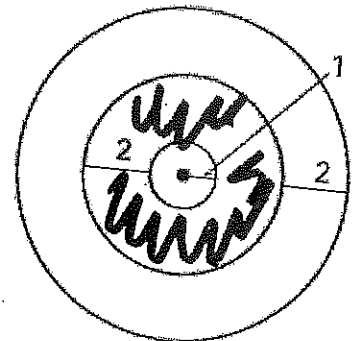
7.



8.



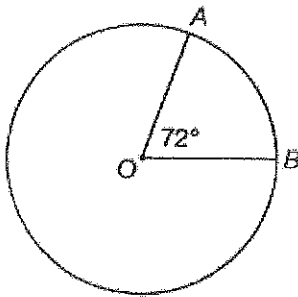
9.



TRY THE FOLLOWING SAT PRACTICE PROBLEMS! ☺

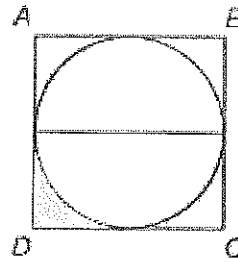
10. What is the distance from the point $(-x, y)$ to the point $(x, -y)$?
- $(x + y)$ units
 - $\sqrt{(x + y)}$ units
 - $(x^2 + y^2)$ units
 - $\sqrt{(x^2 + y^2)}$ units
 - $2\sqrt{(x^2 + y^2)}$ units

11. In the diagram below, if the radius of the circle is 25 units, what is the length of arc AB ?



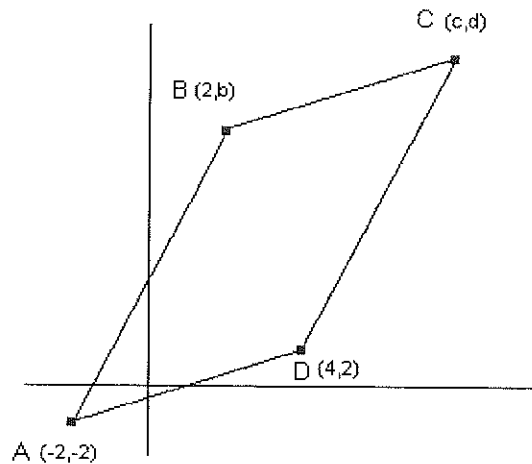
- $\frac{2}{3}\pi$
- 5π
- 10π
- 50π
- 250π

12. If the circle inscribed in square $ABCD$ has a radius of r , what is the size of the shaded area in terms of r ?



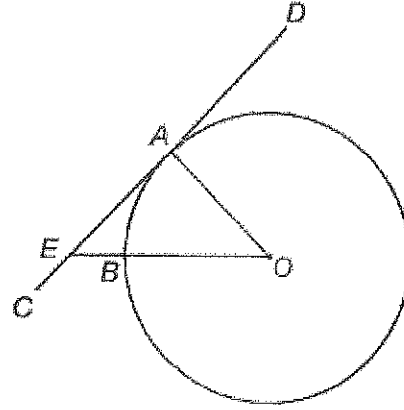
- $r^2 - \pi r^2$
- $2r - \pi r^2$
- $\frac{r}{2} - \frac{\pi r^2}{4}$
- $r^2 - \frac{\pi r^2}{4}$
- $\frac{(r^2 - \pi r^2)}{4}$

13. Find a , b and c so that the quadrilateral is a parallelogram with area equal to 80 square units.



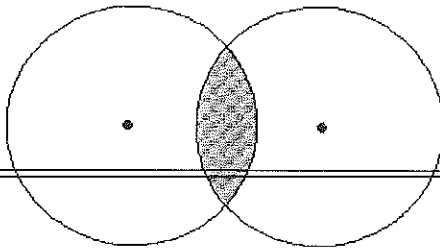
14. What is the midpoint of a line with endpoints at $(2x + 3, y - 4)$ and $(10x - 1, 3y + 6)$?
- $(x + 1, y + 1)$
 - $(\frac{3}{2}x + \frac{3}{2}, \frac{5}{2}y - \frac{5}{2})$
 - $(6x + 1, 2y + 1)$
 - $(8x - 4, 2y + 10)$
 - $(12x + 2, 4y + 2)$

15. In the diagram below, line CD is a tangent and line EO is a secant. If arc $AB = 60^\circ$ and the radius of the circle is 7 units, what is the length of secant EO ?

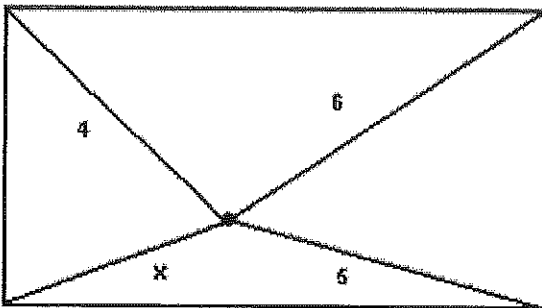


16

The two circles below have equal radii of 4 units each and the distance between their centers is 6 units. Find the area of the shaded region.



17. This one is WACKY!! I will do it Tuesday....but give it a try if you 'd like ;). *find x.*



RIGHT TRIANGLES

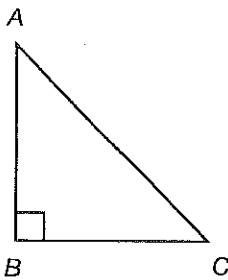
18. If angle B of isosceles triangle ABC is a right angle, what is the tangent of angle A ?

- a. 0
- b. $\frac{1}{2}$
- c. 1
- d. $\frac{\sqrt{3}}{3}$
- e. cannot be determined

20. If the cosine of angle C is $\frac{x}{y}$, triangle ABC is not isosceles, and x does not equal y , which of the following is also equal to $\frac{x}{y}$?

- a. sine of angle A
- b. sine of angle C
- c. cosine of angle A
- d. tangent of angle A
- e. 2

Use the diagram below to answer questions 19-22. The diagram is not to scale.



19. If line AB measures $3x - 6$, line BC measures $x^2 - 2x$, and line AC measures $2x + 2$, what is the tangent of angle A ?

- a. $\frac{x}{3}$
- b. $\frac{3}{x}$
- c. $\frac{3x-6}{2x+2}$
- d. $\frac{(x^2-2x)}{(2x+2)}$
- e. $\frac{2x+2}{3x-6}$

21. If the sine of angle A is $\frac{15}{17}$, what is the cosine of angle A ?

- a. $\frac{8}{17}$
- b. $\frac{8}{15}$
- c. $\frac{12}{17}$
- d. $\frac{17}{15}$
- e. $\frac{15}{8}$

22. If the tangent of angle A is 0.75 and the measure of side AB is 4 less than the measure of side AC , what is the length of side BC ?

- a. 3 units
- b. 4 units
- c. 6 units
- d. 8 units
- e. 12 units