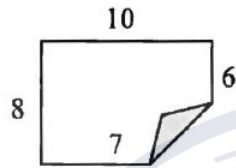


SATPREP

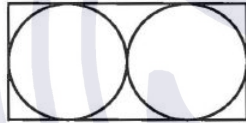
Assignment: Area of Polygon

Easy

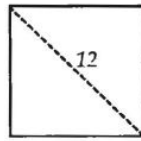
1. A rectangular frame with a 1-inch margin is placed around a rectangular picture with dimensions of 8 inches by 10 inches. What is the area of the frame itself in square inches?
 - a) 40
 - b) 44
 - c) 48
 - d) 52



2. The figure above was originally a rectangle. What is the area of the figure after one corner was folded over as shown above?
 - a) 70
 - b) 72
 - c) 75
 - d) 77



3. In the figure above, two congruent circles are inscribed in a rectangle. If the area of one circle is 9π , what is the area of the rectangle?
 - a) 24
 - b) 27
 - c) 36
 - d) 72
4. If no wallpaper is wasted, how many square feet of wallpaper is needed to cover a rectangular wall that is 5 yards by 7 yards (1 yard = 3 feet)?
 - a) 35 square feet
 - b) 105 square feet
 - c) 300 square feet
 - d) 315 square feet

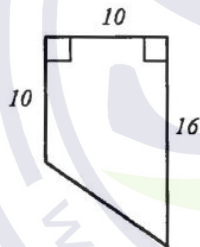


5. What is the area of the square above?
- 64
 - 72
 - 100
 - 144

Medium

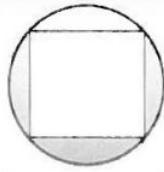


6. If the parallelogram above has side lengths all equal to 12, what is the area of this parallelogram?
- 72
 - $72\sqrt{2}$
 - $72\sqrt{3}$
 - 144



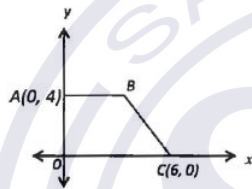
7. What is the area of above quadrilateral?

8. In rectangle WXYZ, point A is the midpoint of XY. If the area of $\triangle WXA$ is 2, what is the area of rectangle WXYZ?

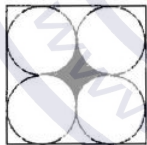


9. A square is inscribed inside a circle as shown in the figure above. If the radius of the circle is 2, what is the area of the shaded region?

Hard



10. In the xy -coordinate plane, AB is parallel to the x -axis. If $AO = AB$, what is the area of quadrilateral $ABCO$?
- a) 12
 - b) 16
 - c) 18
 - d) 20



11. If 4 congruent circles of radius 1 are tangent to the sides of a square as shown in the figure above, what is the area of the shaded region?
- a) $1 + \pi$
 - b) $2 + \pi$
 - c) $4 - \pi$
 - d) $6 - \pi$