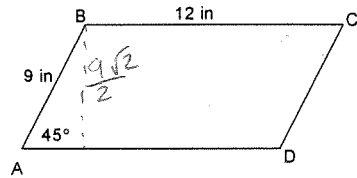


1. Find the area of parallelogram $ABCD$ to the nearest tenth.

$$54\sqrt{2} = 76.368$$



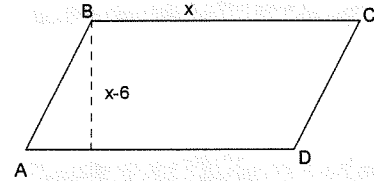
2. The area of parallelogram $ABCD$ is 187 square units. Find the lengths of the height and the base. Round to the nearest tenth.

$$x^2 - 6x - 187 = 0$$

$$(x-17)(x+11) = 0$$

17 ✗

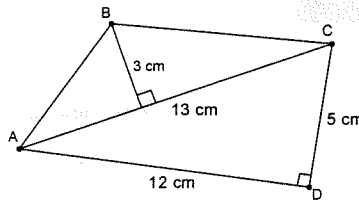
17 * 11



3. Find the area of quadrilateral $ABCD$

$$\frac{13 \cdot 3}{2} + \frac{5 \cdot 12}{2}$$

$$19.5 + 30 = 49.5$$

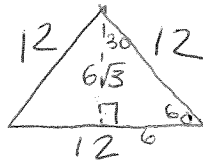


4. Rhombus $ABCD$ has an area of 126 square units. If $DB = 18$, find AC

$$126 = \frac{1}{2} \cdot 18 \cdot x$$

$x = 14$

5. Find the area of an equilateral triangle with a side length of 12 centimeters. Round to the nearest tenth.

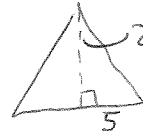


$$\frac{12 \cdot 6\sqrt{3}}{2} = 36\sqrt{3} = 62.354$$

6. Find the area of an octagon with a perimeter of 80 inches. Round to the nearest tenth.

$$\frac{1}{2} \cdot 80 \cdot 12.071$$

482.843

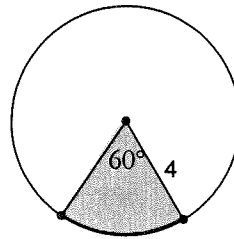


$$\tan 22.5 = \frac{5}{a}$$

$a = 12.071$

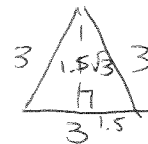
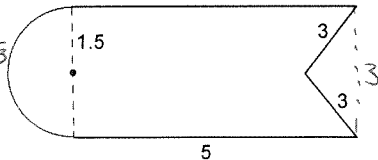
7. Find the area of the shaded region to the nearest tenth.

$$\frac{1}{6} \cdot 16\pi = \frac{8\pi}{3} = 8.378$$



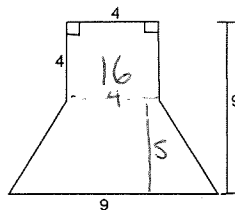
8. Find the area of the figure to the nearest tenth.

$$\frac{2.25\pi}{2} + 15 - \frac{3 \cdot 1.5\sqrt{3}}{2}$$



~~14.637~~ 14.637

9. Find the area of the figure to the nearest tenth.



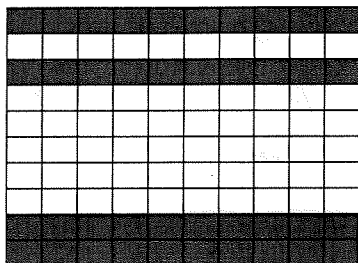
$$\frac{13.5}{2} = \frac{65}{2} = 32.5$$

$$+ 16$$

$$\underline{\hspace{1.5cm}}$$

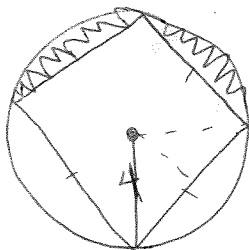
$$48.5$$

10. Find the probability that a point selected at random lies in the shaded region.



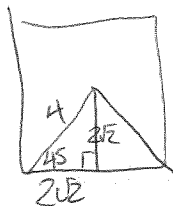
$$\frac{40}{100} = \frac{2}{5}$$

11. Find the probability that a point selected at random lies in the shaded region.



$$O = 16\pi$$

$$A = 4\sqrt{2} \cdot 4\sqrt{2} = 32$$



$$\frac{1}{2}(16\pi - 32) =$$

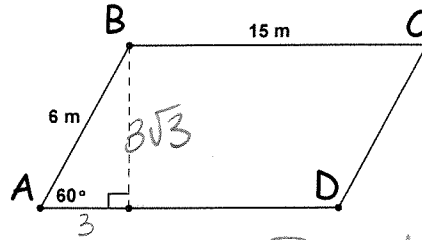
$$9.132$$

$$\frac{9.132}{16\pi} = .18169$$

$$18.17\%$$

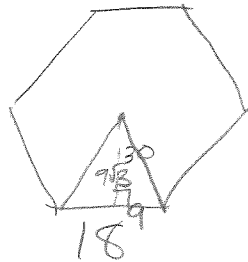
Station 1

Find the area of parallelogram $ABCD$ to the nearest tenth.



$$15 \cdot 3\sqrt{3} = 45\sqrt{3} = 77.9$$

Find the area of a regular hexagon with side length of 18 cm . Simplified Radical Form.



$$6 \left(\frac{1}{2} \cdot 9\sqrt{3} \cdot 18 \right)$$
$$486\sqrt{3}$$

Find the length of the midsegment of a **Trapezoid** who has an area of 156 , and height 12 .

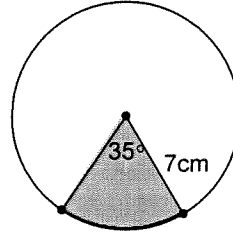
$$156 = M \cdot 12$$

$$M = 13$$

Station 2

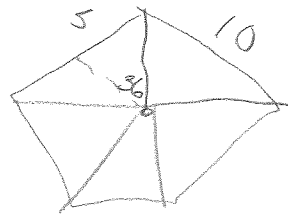
What is the probability that a dart thrown at the dart board will land on the shaded region.

$$\begin{aligned} O &= 49\pi \\ \text{Sector} &= \frac{35}{360} \cdot 49\pi \\ \frac{7}{72} \cdot 49\pi &= \frac{343\pi}{72} \end{aligned}$$



$$\frac{\frac{343}{72}}{49} = \frac{7}{72} \approx 9.77\%$$

Find the area of a regular pentagon with side length 10. Round to the nearest tenth.



$$\begin{aligned} \tan 36 &= \frac{5}{a} \\ a &= 6.88191 \end{aligned}$$

$$5 \left(\frac{1}{2} \cdot 10 \cdot 6.88191 \right) = 172.0$$

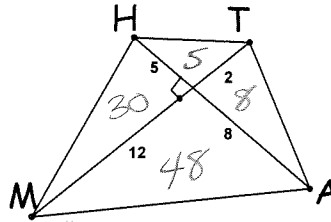
Rhombus $MNOP$ has an area of 300 square units.
If diagonal $MO = 15$ units, find diagonal NP .

$$300 = \frac{1}{2} \cdot 15 \cdot X$$

$$X = 40$$

Station 3

Find the area of quadrilateral *MATH*.



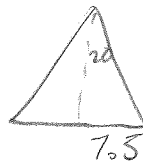
$$\begin{array}{r} 35 \\ + 56 \\ \hline 91 \end{array}$$

Find the area of a nonagon with a perimeter of 135 inches. Round to the nearest tenth.

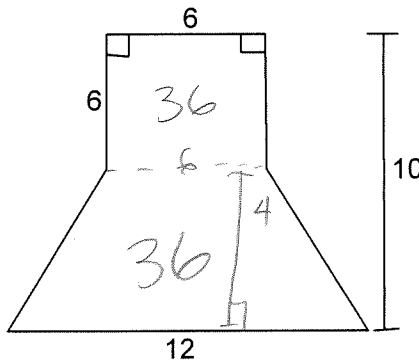
$$\frac{1}{2} 135 \cdot 20.6061 = 1390.9$$

$$\tan 20 = \frac{7.5}{x}$$

$$x = 20.6061$$



Find the area of the figure.

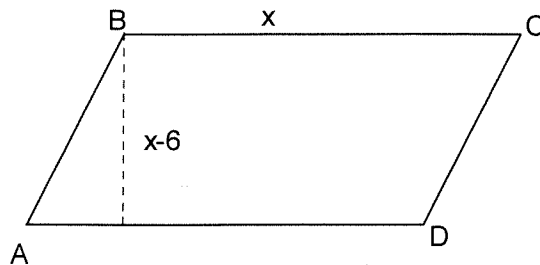


$$\frac{18 \cdot 4}{2} = 36$$

$$72$$

Station 4

Find the base and height of the parallelogram whose area is 160.



$$b = 16$$

$$h = 10$$

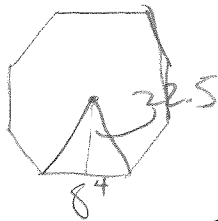
$$160 = x(x-6)$$

$$0 = x^2 - 6x - 160$$

$$0 = (x-16)(x+10)$$

$$x = 16 \quad x = -10$$

Find the area of an octagon with radius 8 cm. Round to the nearest tenth.



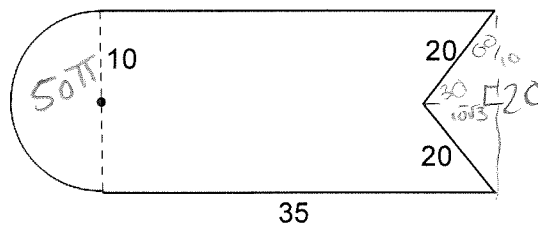
$$\tan 22.5 = \frac{4}{a}$$

$$a = 9.65685$$

$$8 \left(\frac{1}{2} \cdot 8 \cdot 9.65685 \right)$$

$$309.0$$

Find the area of the figure.

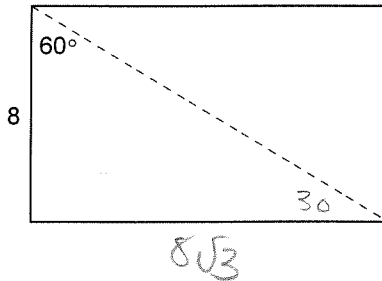


$$50\pi + 700 - 100\sqrt{3}$$

$$683.9$$

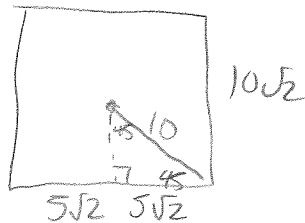
Station 5

Find the area of the rectangle.



$$64\sqrt{3} = 110.851$$

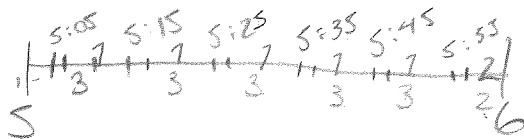
Find the area of a square with a radius of 10 cm. Simplified radical form.



$$10\sqrt{2} \cdot 10\sqrt{2} = 100 \cdot 2$$

200

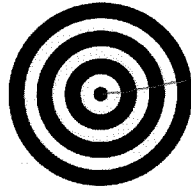
Johnny arrives at the bus station randomly between 5:00 and 6:00 each day. The bus comes every 10 minutes starting at 5:05 and stays at the station for 3 minutes. What's the probability that he gets to the bus station and has to wait 5 or more minutes?



$$\frac{18}{60} = \frac{3}{10}$$

Station 6

Find the area of the largest ring of the bulls eye if each of the rings is 3 cm thick and the center circle has a radius of 1 cm.



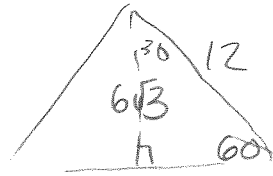
Big $\rightarrow 19$

Smaller $\rightarrow 16$

$$361\pi - 256\pi = 105\pi$$

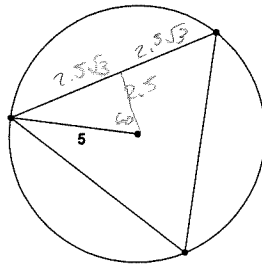
$$\approx 329.9$$

Find the area of an equilateral triangle with side length 12. Simplified radical form.



$$72\sqrt{3}$$

Find the area of ONE segment.



$$O = 25\pi$$

$$\Delta = (5\sqrt{3} \cdot 2.5 \cdot \frac{1}{2}) \cdot 3$$

$$18.75\sqrt{3}$$

$$\text{All} \rightarrow \underline{46.0639}$$

$$\textcircled{138.192}$$