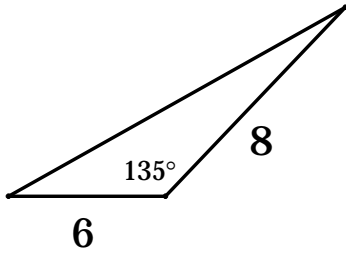
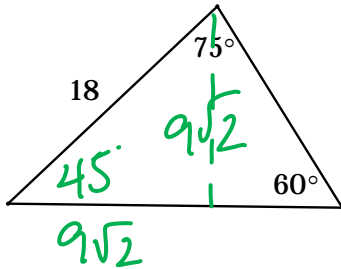


1) Find the area of the triangle and round to the nearest tenth.



$$\text{Area} = \frac{1}{2} \cdot 6 \cdot 4\sqrt{2} \approx 17.0$$

2) Find the area of the triangle and round to the nearest tenth.

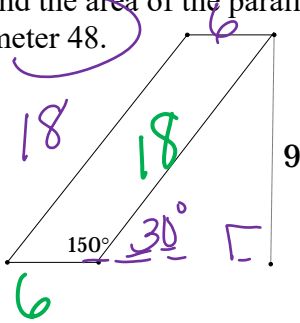


$$x\sqrt{3} = 9\sqrt{2}$$

$$x = \frac{9\sqrt{2} \cdot \sqrt{3}}{3} = \frac{9\sqrt{6}}{3} = 3\sqrt{6}$$

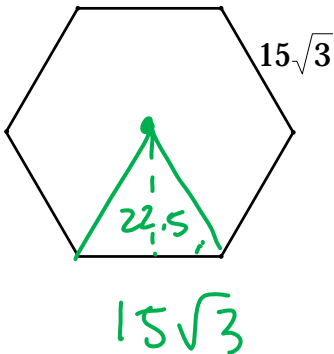
$$\text{Area} = \frac{1}{2} (9\sqrt{2} + 3\sqrt{6}) 9\sqrt{2} = 127.8$$

3) Find the area of the parallelogram with perimeter 48.



$$\text{Area} = 6 \cdot 9 = 54$$

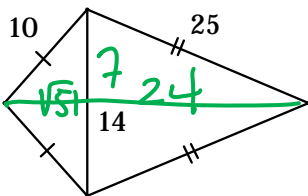
4) Find the area of the regular hexagon and round to the nearest tenth.



$$\text{Area} = 6 \cdot \frac{1}{2} \cdot 15\sqrt{3} \cdot 22.5$$

$$= 1753.7$$

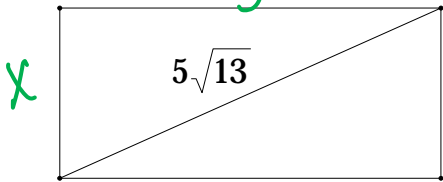
5) Find the area and round to the nearest tenth.



$$\text{Area} = \frac{1}{2} \cdot 14 \cdot \sqrt{51} + \frac{1}{2} \cdot 14 \cdot 24$$

$$= 218.0$$

6) Find the area of the rectangle with perimeter 50.



Area = 150

$$x + y = 25$$

$$x^2 + y^2 = 325$$

$$x^2 + (25 - x)^2 = 325$$

$$x^2 + 625 - 50x + x^2 = 325$$

$$2x^2 - 50x + 300 = 0$$

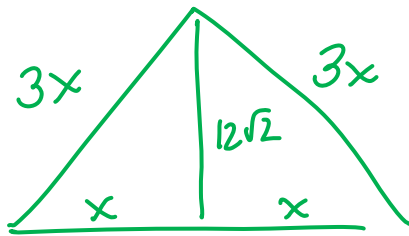
$$x^2 - 25x + 150 = 0$$

$$(x - 10)(x - 15) = 0$$

$$x = 10, 15$$

7) Find the area of an isosceles triangle (round to the nearest tenth) if the altitude to the base is  $12\sqrt{2}$  and the leg to base ratio is 3:2.

Area =  $\frac{1}{2} \cdot 12 \cdot 12\sqrt{2} = 101.8$

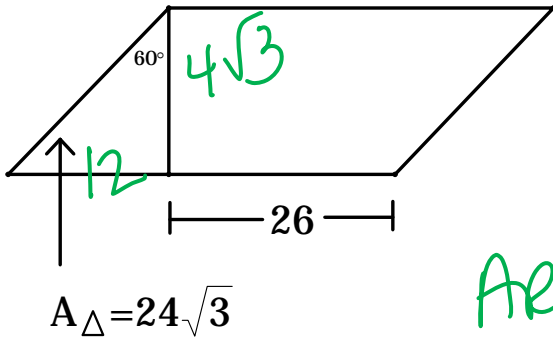


$$(3x)^2 = x^2 + (12\sqrt{2})^2$$

$$9x^2 = x^2 + 144 \cdot 2$$

$$8x^2 = 288, x = 6$$

8) Find the area of the parallelogram and round to the nearest tenth.



$$A_{\Delta} = 24\sqrt{3}$$

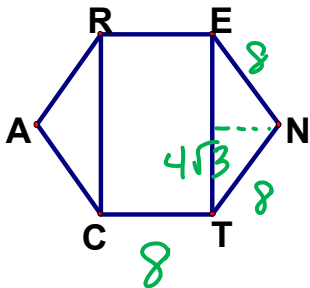
$$\frac{1}{2} \cdot x\sqrt{3} \cdot x = 24\sqrt{3}$$

$$x^2 = 48$$

$$x = 4\sqrt{3}$$

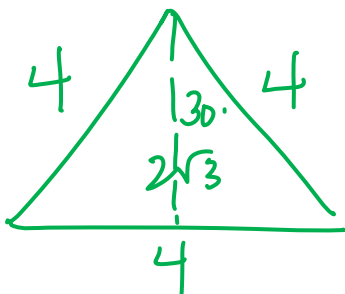
$$\text{Area} = 38 \cdot 4\sqrt{3} = 263.3$$

9) Determine the area of rectangle RECT in the regular hexagon with side = 8 (round to the nearest tenth).



$$8 \cdot 8\sqrt{3} = 110.9$$

10) Find the area of an equilateral triangle with a semiperimeter of 6 (round to the nearest tenth).



$$\rightarrow \text{perimeter} = 12$$

$$\text{Area} = \frac{1}{2} \cdot 4 \cdot 2\sqrt{3} = 6.9$$