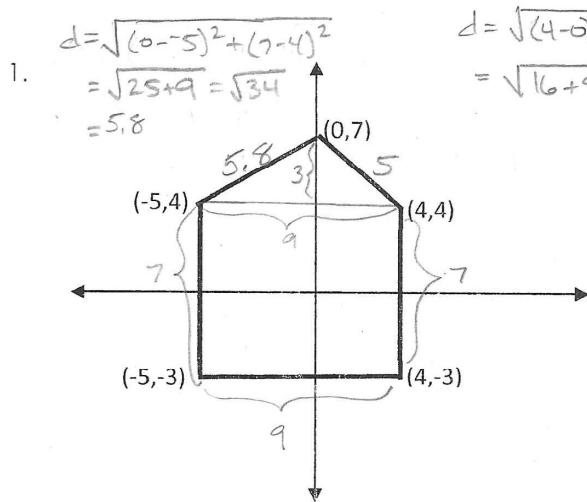


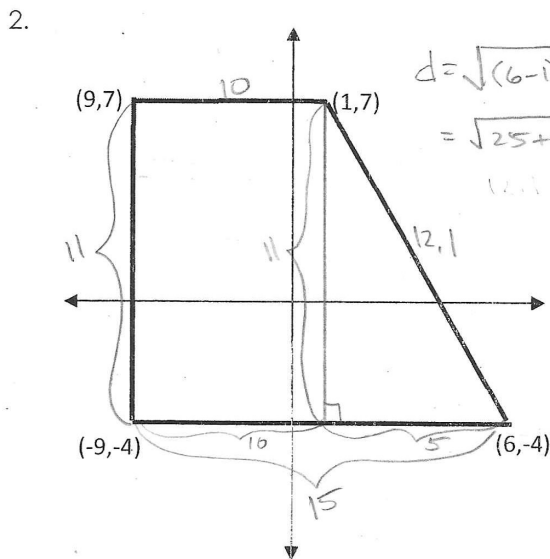
Area and Perimeter of Composite Shapes Notes

How to find the area and perimeter of composite shapes?

1. Use the distance formula to find the measure of each side. $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
2. Add all the sides to calculate perimeter.
3. Divide the composite figure into shapes that we know! (Triangles, rectangles, squares)
4. Calculate the area of all shapes.
5. To find total area, add all areas together.



$5.8 + 5 + 7 + 7 + 9$
 Total Perimeter: 33.8 units
 Area of Triangle: $\frac{1}{2}(9)(3) = 13.5 \text{ units}^2$
 Area of rectangle: $9 \cdot 7 = 63 \text{ units}^2$
 Total Area: $13.5 + 63 = 76.5 \text{ units}^2$



$10 + 11 + 15 + 12.1$
 Total Perimeter: 48.1 units
 Area of triangle: $\frac{1}{2}(5)(11) = 27.5 \text{ units}^2$
 Area of rectangle: $10 \cdot 11 = 110 \text{ units}^2$
 Total Area: $27.5 + 110 = 137.5 \text{ units}^2$

3.

$$d = \sqrt{(-5 - -8)^2 + (1 - -6)^2}$$

$$= \sqrt{9 + 49} = \sqrt{58} = 7.6$$

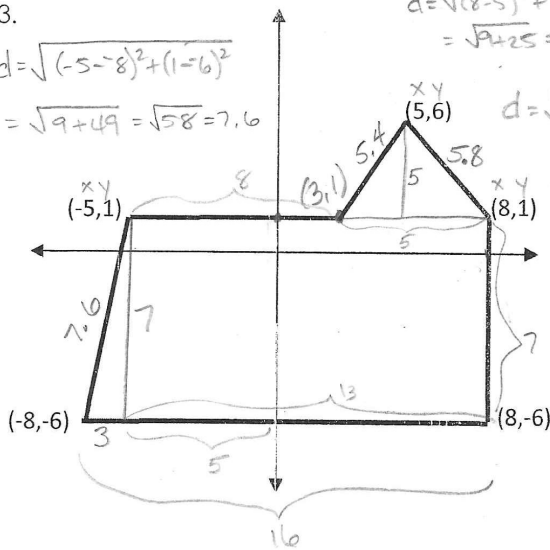
$$d = \sqrt{(8 - 5)^2 + (1 - 6)^2}$$

$$= \sqrt{9 + 25} = \sqrt{34} \approx 5.8$$

$$d = \sqrt{(5 - 3)^2 + (6 - 1)^2}$$

$$\sqrt{4 + 25} = \sqrt{29}$$

$$\approx 5.4$$



Total Perimeter: 49.8 units

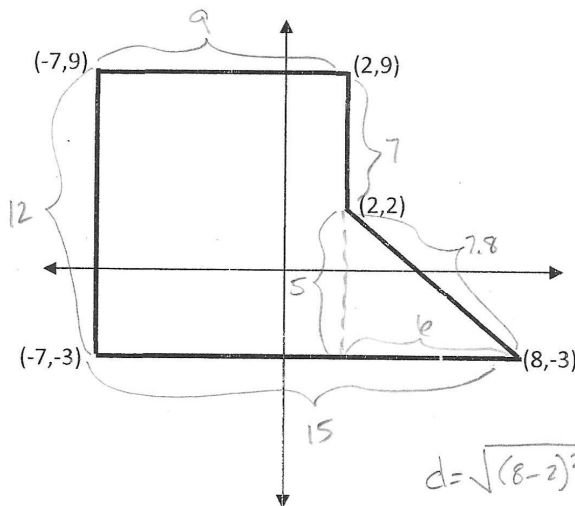
Area of side triangle: $\frac{1}{2}(3)(7) = 10.5 \text{ units}^2$

Area of top triangle: $\frac{1}{2}(5)(5) = 12.5 \text{ units}^2$

Area of rectangle: $(13)(7) = 91 \text{ units}^2$

Total Area: $10.5 + 12.5 + 91 = 114 \text{ units}^2$

4.



$$d = \sqrt{(8 - 2)^2 + (-3 - 2)^2}$$

$$= \sqrt{36 + 25} = \sqrt{61} \approx 7.8$$

Total Perimeter: 50.8 units

Area of rectangle: $(9)(12) = 108 \text{ units}^2$

Area of triangle: $\frac{1}{2}(6)(5) = 15 \text{ units}^2$

Total Area: $108 + 15 = 123 \text{ units}^2$