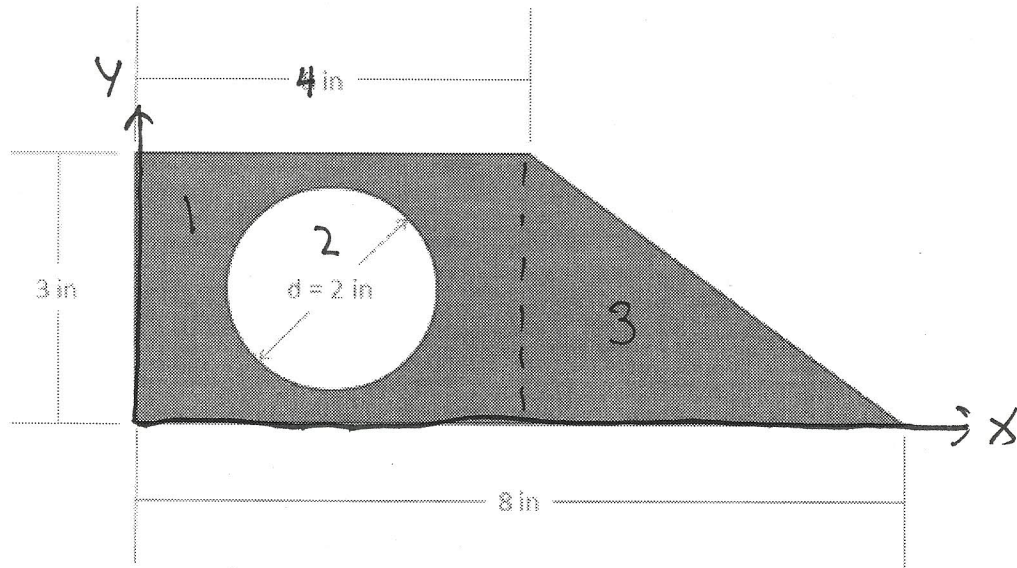


Question 1:

Find the x and y coordinates of the centroid of the shape shown below.



Calculations:

Shape	Area	\bar{X}	\bar{Y}
1	12 in^2	2 in	1.5 in
2	-3.14 in^2	2 in	1.5 in
3	6 in^2	5.33 in	1 in

$$\bar{X} = \frac{(12)(2) + (-3.14)(2) + (6)(5.33)}{12 - 3.14 + 6}$$

$$\bar{X} = 3.34 \text{ m}$$

$$\bar{Y} = \frac{(12)(1.5) - (3.14)(1.5) + (6)(1)}{12 - 3.14 + 6}$$

$$\bar{Y} = 1.29 \text{ m}$$

Solution

$$\bar{X} = 3.34 \text{ m} \quad \bar{Y} = 1.29 \text{ m}$$