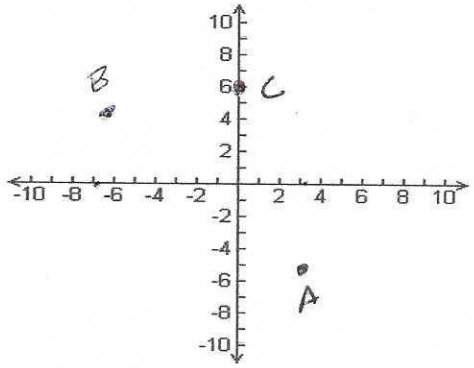
Math 1215 Hw 5 Name: Sol

1. Plot:
Point A (3,-5) Point B (-7, 4) Point C (0, 6)



2.Find the distance between the given points.

(2, 2) and (5, -2)

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

$= \sqrt{16+9} = 5$

(0, 2) and (-2, 10)

$d = \sqrt{(-2-0)^2 + (10-2)^2}$

$= \sqrt{4+64} = \sqrt{68}$

$= 2\sqrt{17}$

3.Find the midpoint.

(3, -2) and (-5, 6)

$\text{Midpt} = \left(\frac{3-5}{2}, \frac{-2+6}{2}\right) = (-1, 2)$

(-2, 7) and (5, -7)

$\text{Midpt} = \left(\frac{-2+5}{2}, \frac{7-7}{2}\right) = \left(\frac{3}{2}, 0\right)$

4.Find the midpoint and the distance of the line segment.

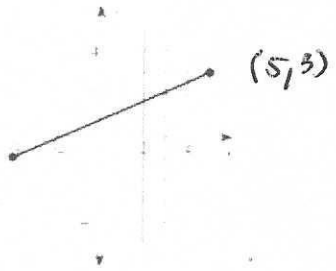
$d = \sqrt{(5+4)^2 + (3+1)^2}$

$= \sqrt{81+16}$

$= \sqrt{97}$

$\text{Midpt} = \left(\frac{5-4}{2}, \frac{3-1}{2}\right)$

$= \left(\frac{1}{2}, 1\right)$



5.Write the equation for each circle if the coordinates of the center and length of the radius are given.

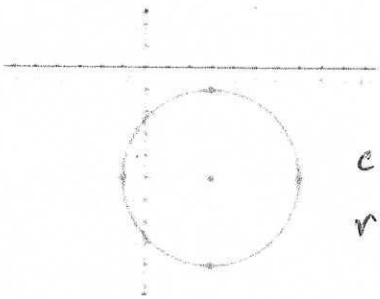
(5, 3), r = 3

$(x-5)^2 + (y-3)^2 = 3^2$

(-2, -4), r = 5

$(x+2)^2 + (y+4)^2 = 5^2$

6.Write the equation for a given circle.



c(3, -5)

r = 4

$(x-3)^2 + (y+5)^2 = 4^2$