

11 Find the equation of the circle with the diameter having endpoints at (-2, 6) and (6, -4).

* USE MIDPOINT

Midpoint $\left(\frac{-2+6}{2}, \frac{6+(-4)}{2}\right) \Rightarrow (2, 1)$

radius \rightarrow distance $(-2, 6)$ & $(2, 1)$

$$\sqrt{(6-1)^2 + (-2-2)^2}$$

$$\sqrt{25 + 16} = \sqrt{41}$$

$$(x - 2)^2 + (y - 1)^2 = (\sqrt{41})^2$$

$$(x - 2)^2 + (y - 1)^2 = 41$$

12 Which equation represents the perpendicular bisector of \overline{AB} whose endpoints are $A(8, 2)$ and $B(0, 6)$?

Midpt $\left(\frac{8+0}{2}, \frac{2+6}{2}\right) \Rightarrow (4, 4)$

slope: $\frac{6-2}{0-8} = \frac{4}{-8} = -\frac{1}{2}$ $\perp \rightarrow 2$

(1) $y = 2x - 4$

(3) $y = -\frac{1}{2}x + 6$

(2) $y = -\frac{1}{2}x + 2$

(4) $y = 2x - 12$

$$y - 4 = 2(x - 4)$$

$$y - 4 = 2x - 8$$

$$y = 2x - 4$$

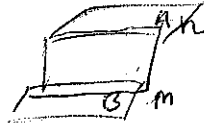
13 Plane A is parallel to plane B . Plane C intersects plane A in line m and intersects plane B in line n . Lines m and n are

(1) intersecting

(3) perpendicular

(2) parallel

(4) skew



14 Triangle PQR has angles in the ratio of 2:3:5. Which type of triangle is $\triangle PQR$?

$36^\circ \rightarrow 54^\circ \rightarrow 90^\circ$

(1) acute

(3) obtuse

(2) isosceles

(4) right

$$2x + 3x + 5x = 180$$

$$10x = 180$$

$$x = 18$$

15 Segment AB is the diameter of circle M . The coordinates of A are $(-4, 3)$. The coordinates of M are $(1, 5)$. What are the coordinates of B ?

(1) $(6, 7)$

(3) $(-3, 8)$

(2) $(5, 8)$

(4) $(-5, 2)$



16 How many points are 2 units from the origin and also 1 unit from the line $x = 3$?

(1) 1

(2) 2

(3) 3

(4) 0

