

Practice 51

Supplementary Practice

Lessons 13-1 through 13-3

Find the distance between the given points.

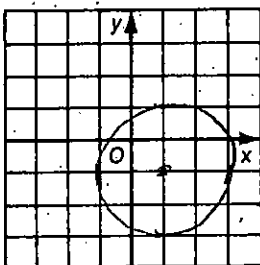
- $(5, 12)$ and $(-8, 12)$ 13
- $(4, -7)$ and $(4, 4)$ 11
- $(-6, 8)$ and $(5, 4)$ $\sqrt{137}$
- $(-4, 1)$ and $(4, 9)$ $8\sqrt{2}$

5. Find the center and radius of the circle with equation $(x - 5)^2 + (y + 2)^2 = 15$.

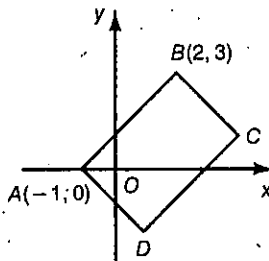
center = $(5, -2)$, radius = $\sqrt{15}$

6. A line through the origin with slope $-\frac{3}{5}$ also passes through the point $(7, t)$. Find the value of t . $-\frac{21}{5}$

7. Sketch the graph of $(x - 1)^2 + (y + 1)^2 = 4$.



8. In the figure below, $ABCD$ is a rectangle. Complete.

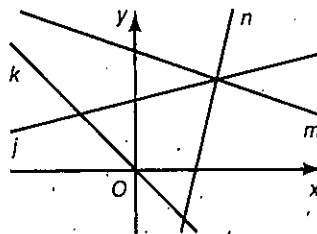


$DC = \underline{3\sqrt{2}}$, slope of $\overline{DC} = \underline{1}$,
slope of $\overline{AD} = \underline{-1}$

9. Find an equation of the circle that has center $(2, 5)$ and passes through the point $(4, 6)$: $(x - 2)^2 + (y - 5)^2 = 5$

Refer to the figure. Name each line whose slope is:

- positive j, n
- negative k, m
- zero x
- not defined y



14. Given: points $A(3, 8)$ and $B(-2, 6)$

- Find the slope of a line perpendicular to \overrightarrow{AB} . $-\frac{5}{2}$
- Find the slope of a line parallel to \overrightarrow{AB} . $\frac{2}{5}$