

EXAM 1
Math 101
Feb. 5, 2002

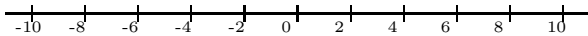
Name _____

Do all work neatly. Show all of your work. Circle your final answer where appropriate. Label all graphs and number lines.

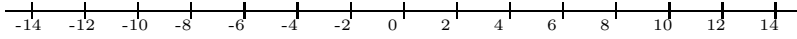
1. Solve for y : $3y - 2(y - 5) = 7y - 3$

2. Solve for x : $\frac{3}{4}(x + 2) = \frac{5}{6}(x - 3)$

3. Solve for x : $-4 \leq -2(x + 2) + 8 < 16$, display your answer on the number line.



4. Solve for x : $2(x - 4) + 2 \geq -14$, display your answer on the number line.



5. Find the slope, the x -intercept and the y -intercept of the equation $-3x + 6y = 8$.

Slope _____

x -intercept _____

y -intercept _____

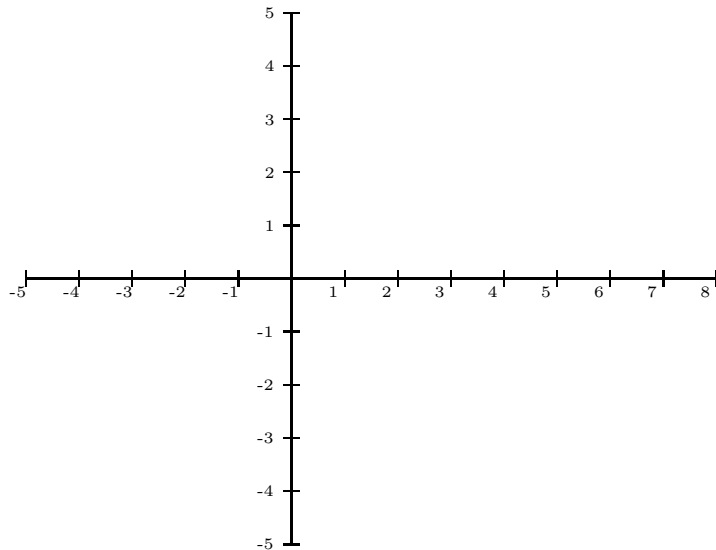
6. Find the distance between the points $(0, 5)$ and $(1, -1)$.

7. Circles

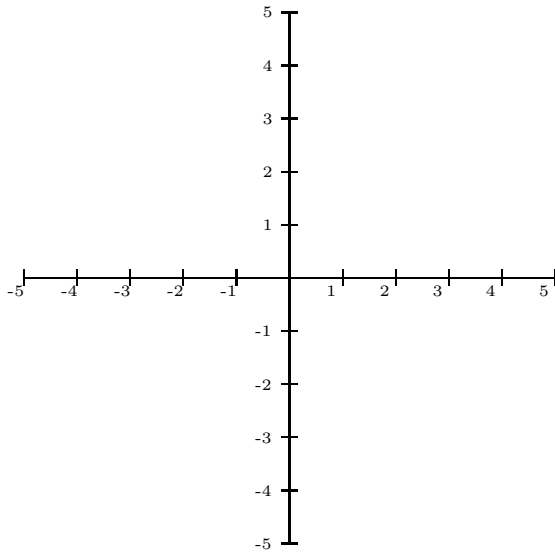
(a) Write the equation of the circle with center at $(2, -3)$ and radius 11.

(b) Find the center and radius of a circle whose equation is $(x + 2)^2 + (y - 4)^2 = 4$.

8. Graph the line that passes through the point $(-1, 2)$ and has a slope of $\frac{-3}{4}$.



9. Find the slope of the equation $3x + 2y = 2$ and graph the equation.



10. Find the equation of the line perpendicular to the equation $\frac{1}{2}x + \frac{2}{3}y = 2$ and which passes through the point $(1, -1)$. Graph both equations.

