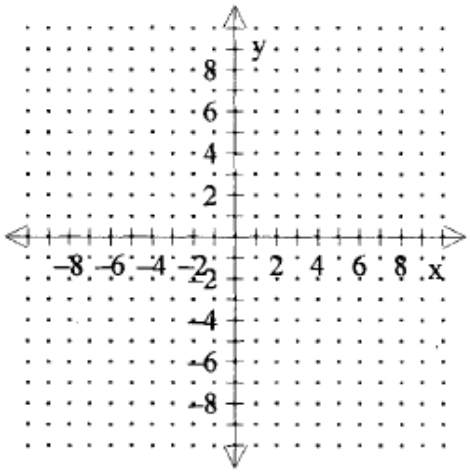
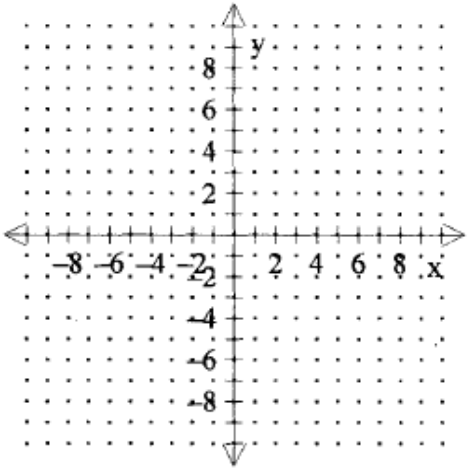
Graphing Practice

First Semester Final Exam Ch 1-3, 5, 10, 6, 7

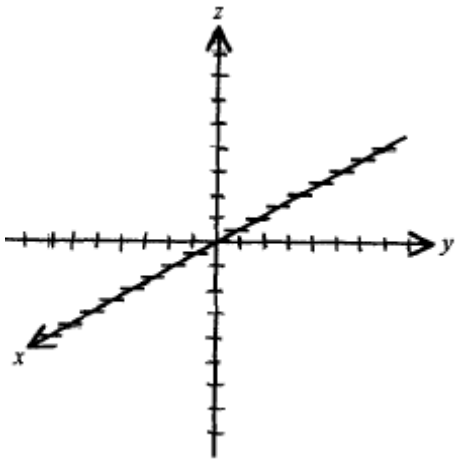
1. $y = \frac{-2}{3}|x - 4| - 2$



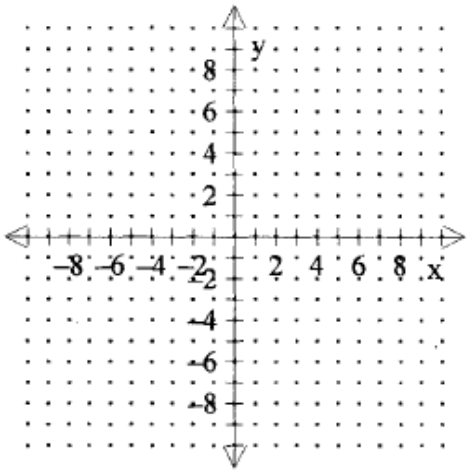
2. $f(x) = \begin{cases} \frac{1}{2}x - 1, & \text{if } x > -2 \\ -2x + 1, & \text{if } x \le -2 \end{cases}$



3. $-3x + 2y - 6z = 18$

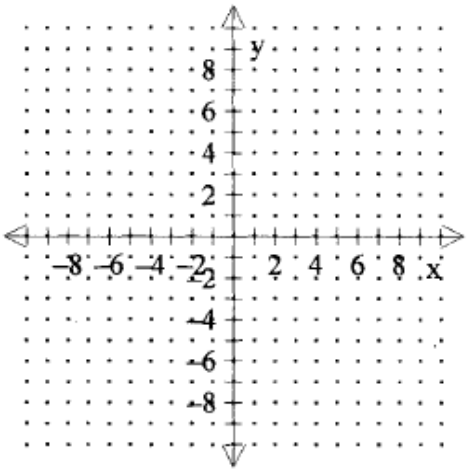


4. the system: $\begin{aligned} -5 < x &< 4 \\ 2x - 5y &\ge 10 \end{aligned}$



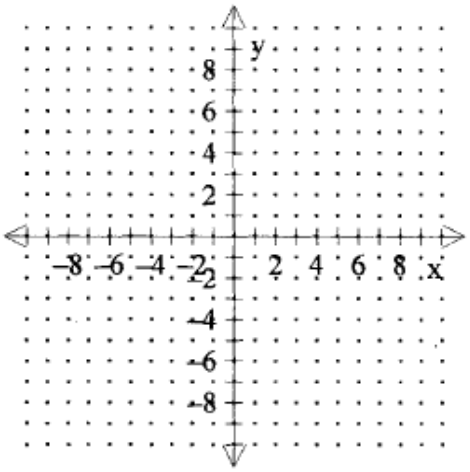
5. $y = 2x^2 - 4x - 3$

Locate vertex and axis of symmetry.



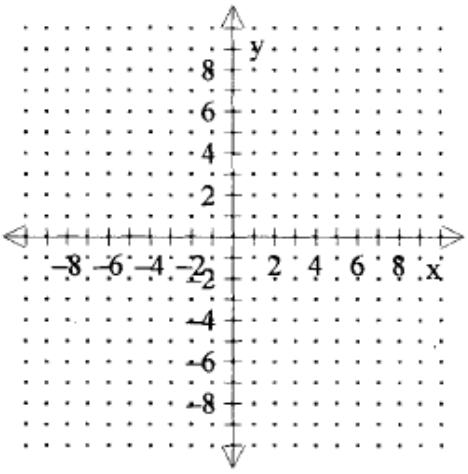
6. $y = \frac{-1}{2}(x+4)(x-2)$

Locate vertex and *x*-intercepts.



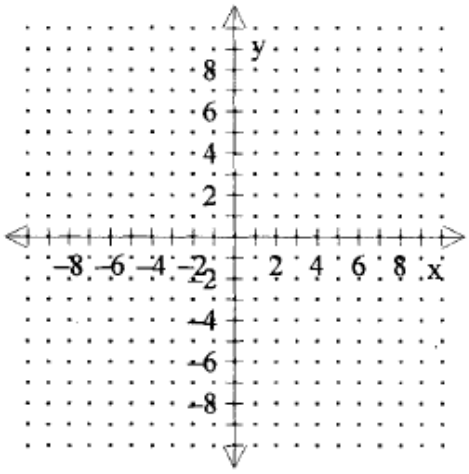
7. $y + 5 = \frac{-1}{8}(x-2)^2$

Locate vertex, focus, and directrix, and axis of symmetry.

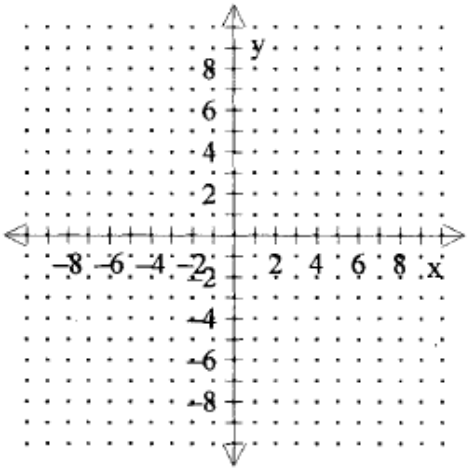


8. $\frac{(x-2)^2}{16} + \frac{(y+1)^2}{36} = 1$

Locate center, vertices, co-vertices, and foci.

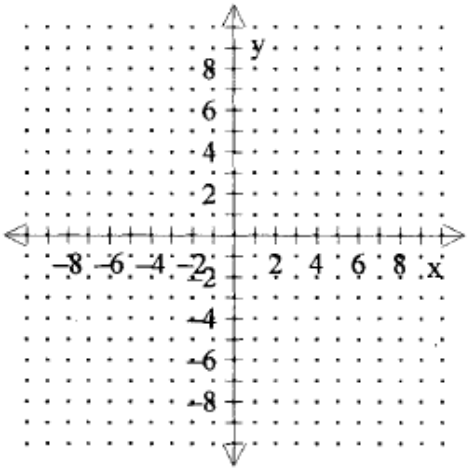


9. $y = \frac{-1}{2}\sqrt{x+2} + 5$



10. $y^2 - 4y - 2x + 2 = 0$

Locate vertex, focus, directrix, and axis of symmetry.



11. $y^2 - 3x^2 - 6x - 4y - 8 = 0$

Locate vertices, foci, and asymptotes.