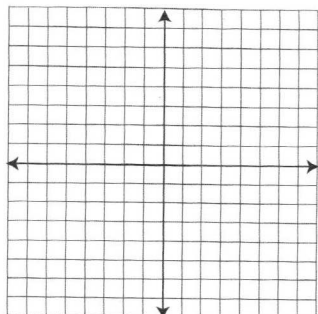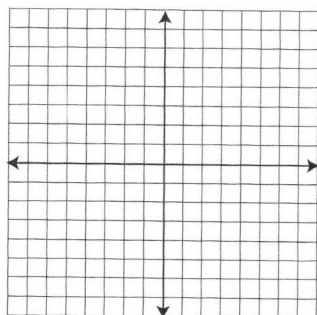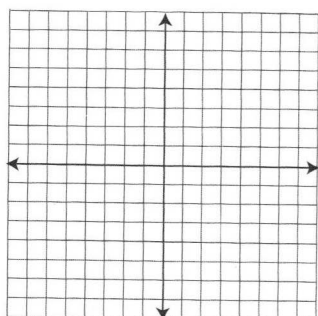For each equation, plot several points and graph.
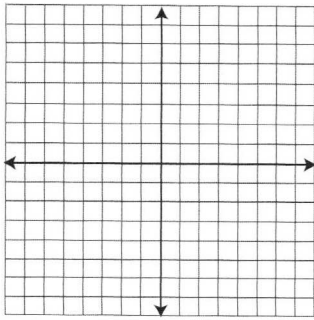
1. $XY = 8$

2. $XY - 12 = 0$
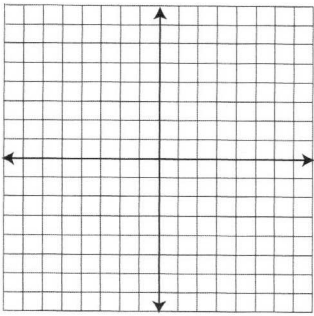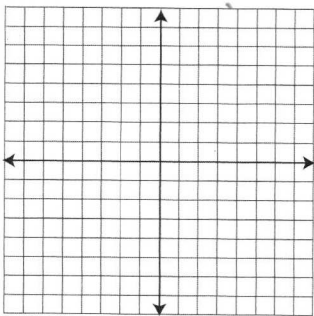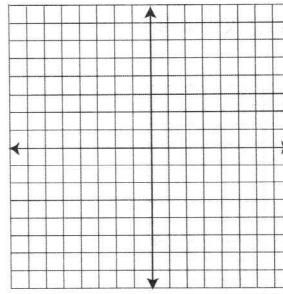

3. $-XY = -5$

4. $X^2 - 5Y^2 = 25$

5. $3X^2 - Y^2 = 6$

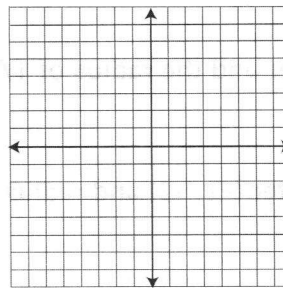6. $5X^2 - 25 = Y^2$

Given $XY = -12$.

    1. Plot several points.
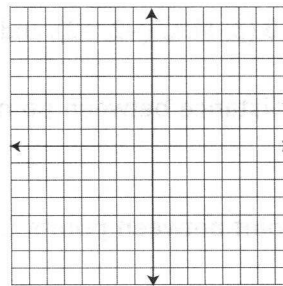
    2. Sketch the graph.

Given $-XY = -3$.

    3. Plot several points.

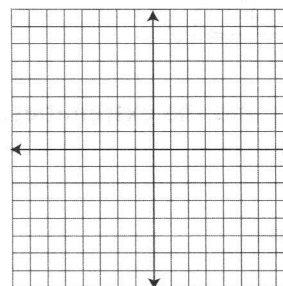   4. Sketch the graph.

Given $9X^2 = 6Y^2 + 18$.

    5. Plot several points.
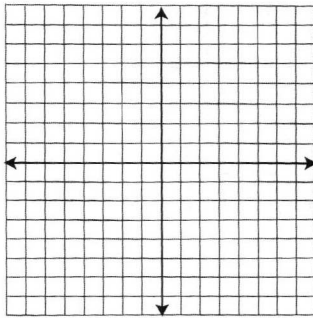
    6. Sketch the graph.
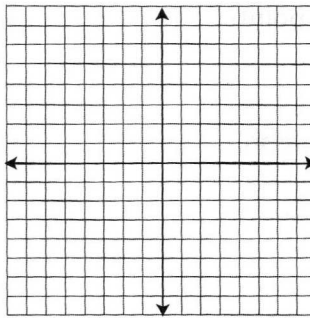
Given $Y = -X^2 + 4X - 4$.

    7. Find the axis of symmetry.

    8. Find the vertex.

    9. Sketch the graph.

10. Graph $3Y = -3/2 \, X^2 + 3$.

11. Graph $1/2 + 1/4 \, Y = 1/8 \, X^2$.

12. Find the center and the radius of $1/2 \, (X + 2)^2 + 1/2 \, (Y - 3)^2 = 32$.

13. Given the center $(-2, -2)$ and radius (5), create the equation of the circle.

14-15. Find the center and radius of $4X^2 - 32X + 64 + 4Y^2 - 24Y = 0$.

Given points A $(-2, 5)$, B $(3, 1)$, C $(-2, -2)$, and D $(4, -4)$:

16. Compute the distance between points C and D.

17. Find the midpoint between points C and D.

18. What is the slope/intercept equation of the line parallel to $3Y = X - 9$ through $(4, 1)$?

Given $\dfrac{(X+1)^2}{4} + \dfrac{(Y-2)^2}{9} = 1$:

19. Find the center and the extremities.

20. Graph the figure.