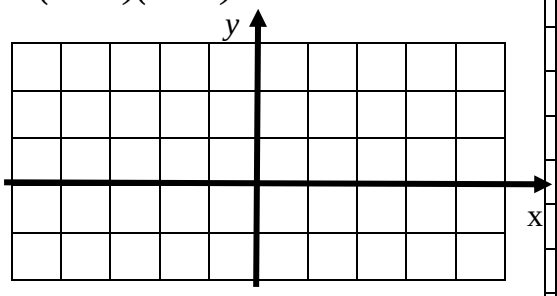
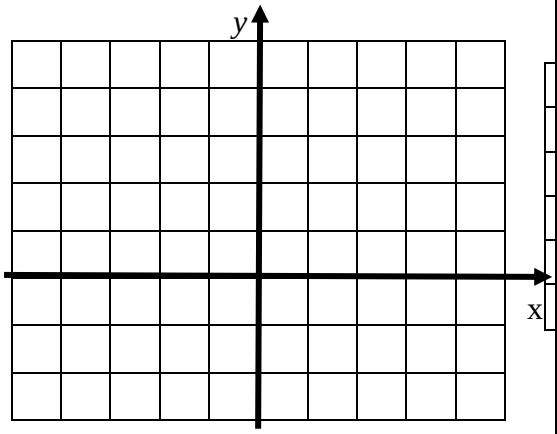
Sketching Polynomial Graphs.

Sketch each graph on the axes provided being careful to show where the graphs cross the axes.

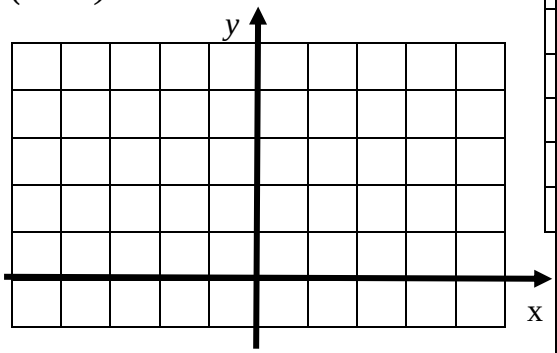
1. $y = (x - 1)(x - 3)$



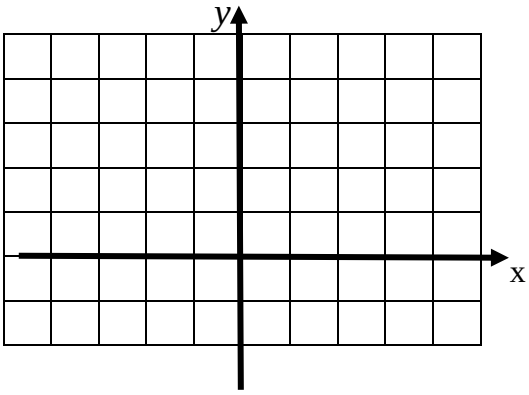
2. $y = (x + 2)(x - 1)(x - 2)$



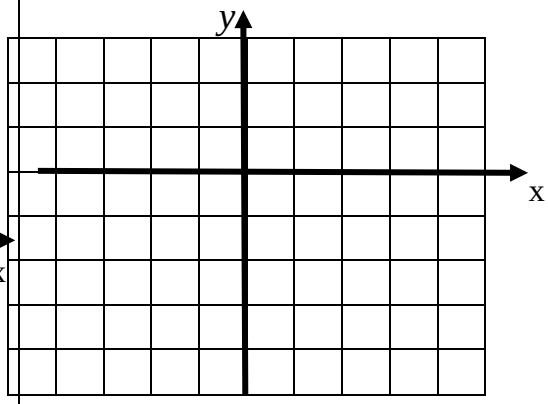
3. $y = (x - 3)^2$



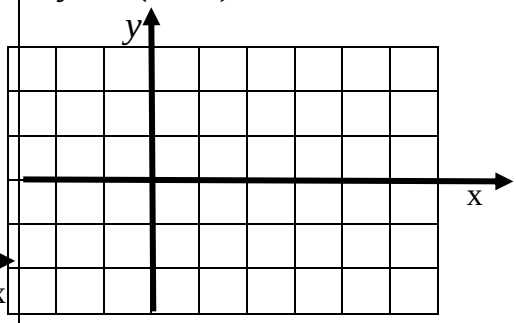
4. $y = (x + 3)(x - 2)^2$



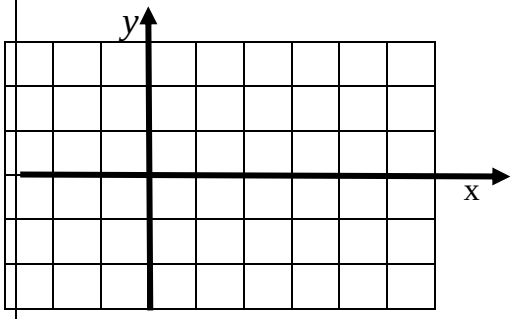
5. $y = (x + 1)^2(x - 3)$



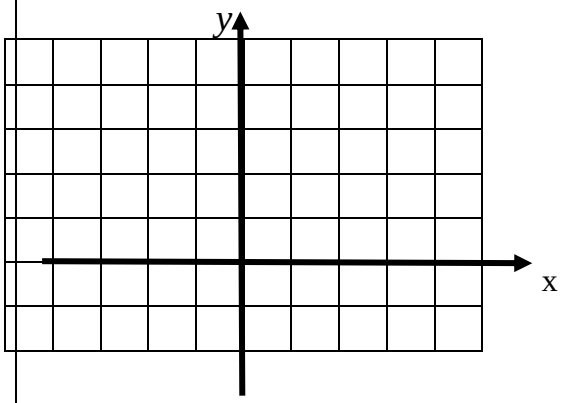
6. $y = x(x - 4)^2$



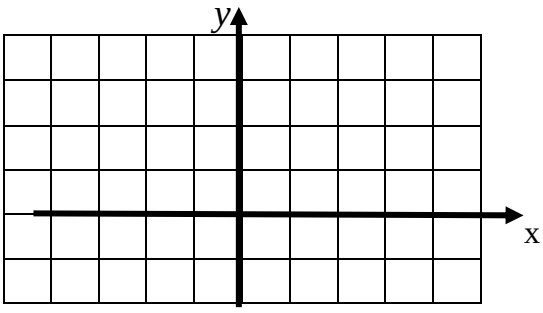
7. $y = x^2(x - 3)$



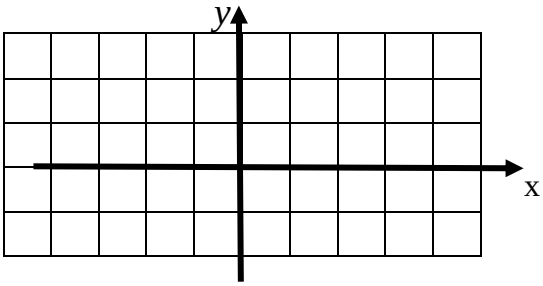
8. $y = (x + 2)^2(x - 3)^2$



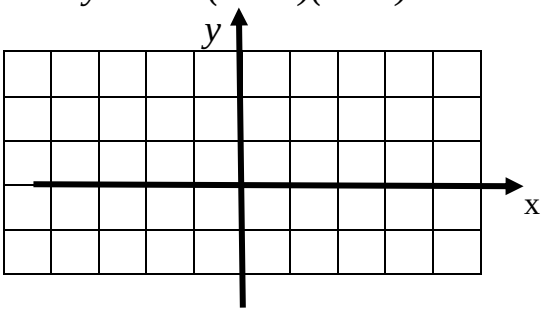
9. $y = -x(x-4)$



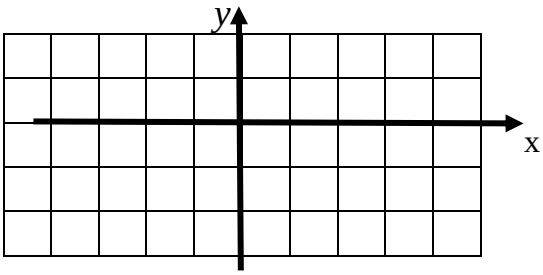
10*. $y = x(3-x)$



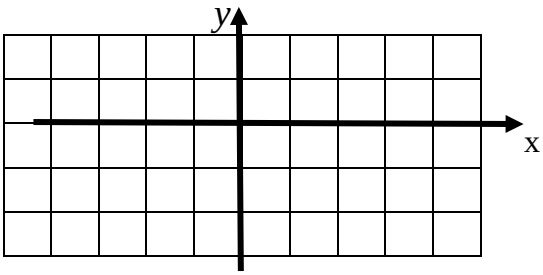
11. $y = -x(x+2)(x-3)$



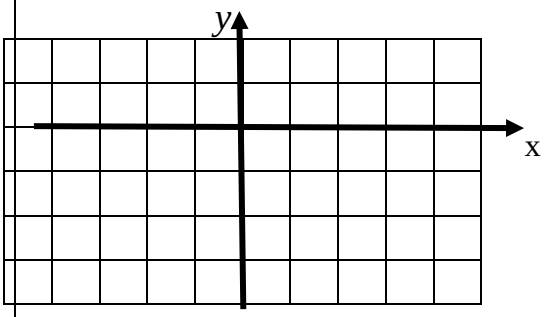
12. $y = x(x-2)(x-4)$



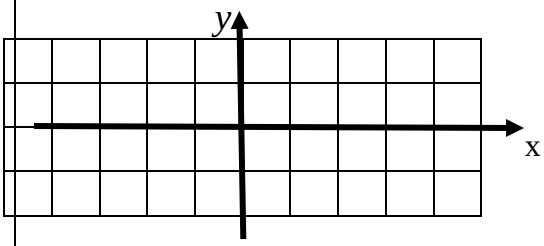
13. $y = x(x+2)\mathbf{(4-x)}$



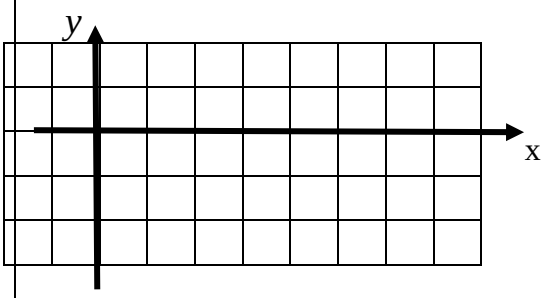
14. $y = x^2 - 3x - 4 = (\qquad)(\qquad)$



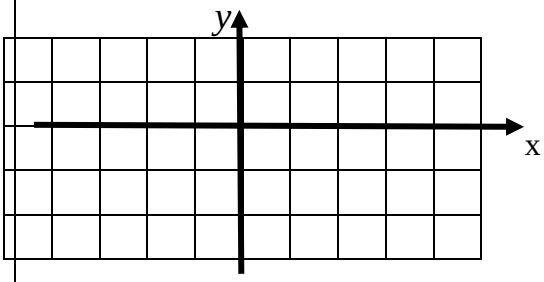
15. $y = x^3 + x^2 - 2x = x(\qquad)(\qquad)$



16. $y = x(x-2)(x-4)(x-6)$



17. $y = (x+3)(x-1)(x-2)\mathbf{(4-x)}$



18. $y = x(x-2)^2(x-4)(x-6)^2$