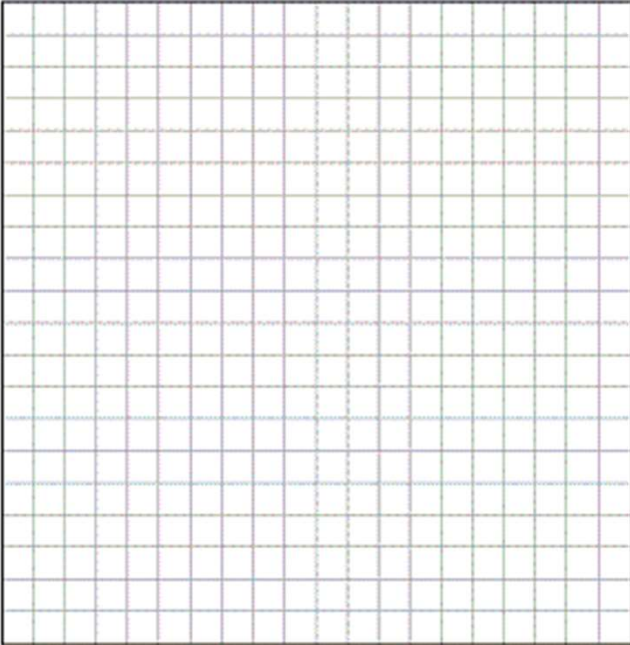


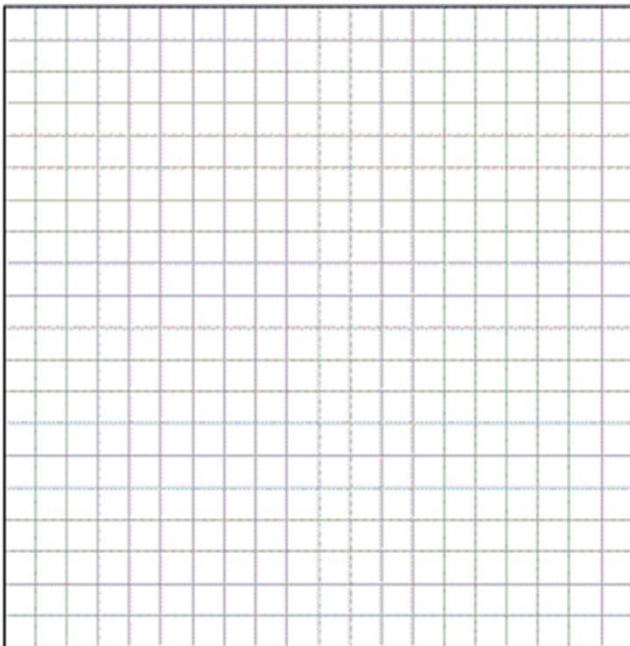
Sketch Quadratic Graphs

1. Graph the following functions, and identify key features of the graph.

a) $f(x) = 5(x - 2)(x - 3)$



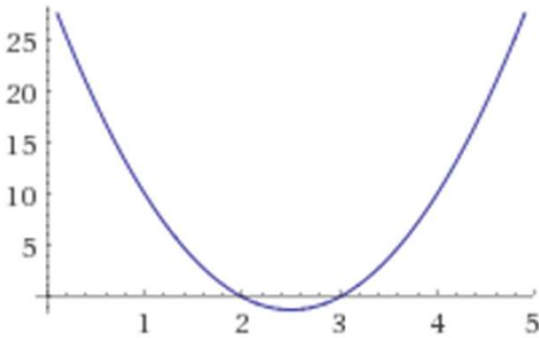
b) $p(x) = -6x^2 + 42x - 60$



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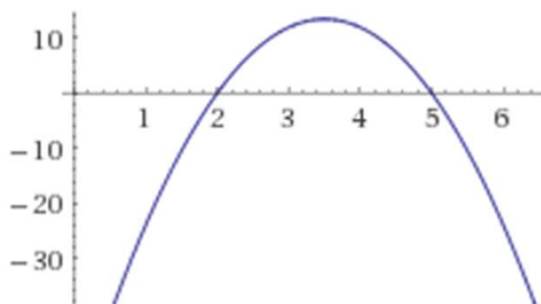
x-intercepts are $(2, 0)$ and $(3, 0)$;

vertex is where $x =$
2.5: $(2.5, -1.25)$;

and the *y*-intercept is $(0, 30)$;

end behavior: this graph opens up
(as x approaches $\pm\infty$, y approaches ∞).

b) $p(x) = -6x^2 + 42x - 60$



$p(x) = -6(x - 5)(x - 2)$

x-intercepts are $(5, 0)$ and $(2, 0)$;

the *y*-intercept is $(0, -60)$;

the axis of symmetry is at $x = 3.5$;

the vertex is $(3.5, 13.5)$;

end behavior: this graph opens down (as x
approaches $\pm\infty$, y approaches $-\infty$)