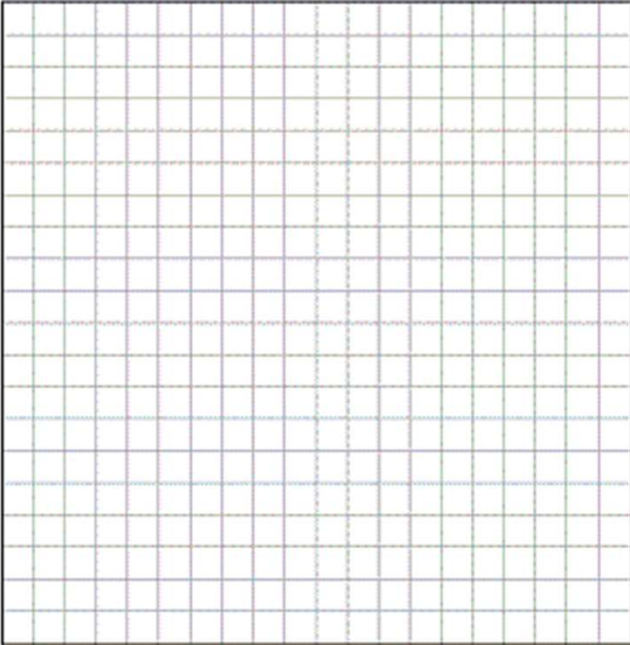


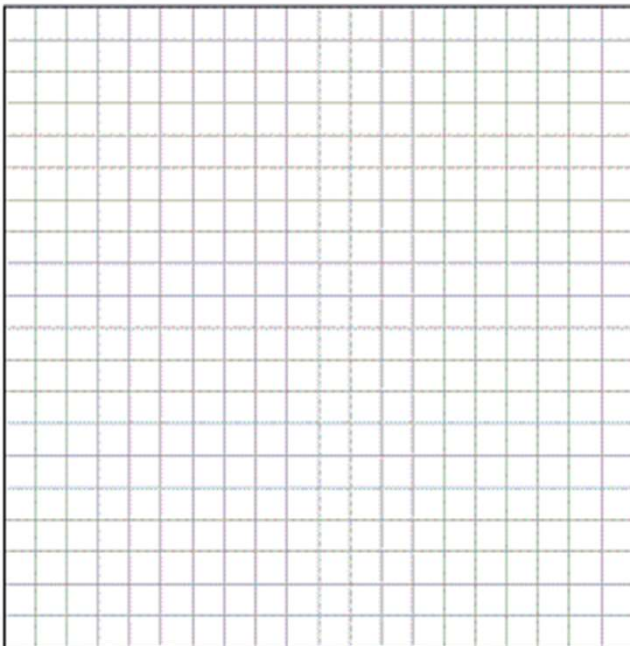
Sketch Quadratic Graphs

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

a) $f(x) = (x - 2)(x + 7)$



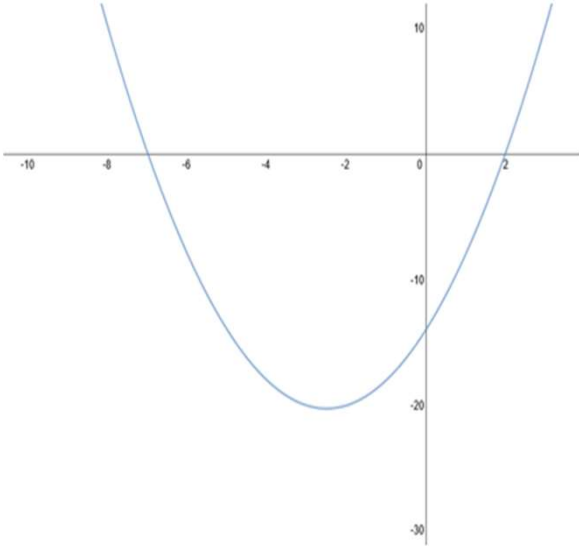
b) $h(x) = -3(x - 2)(x + 2)$



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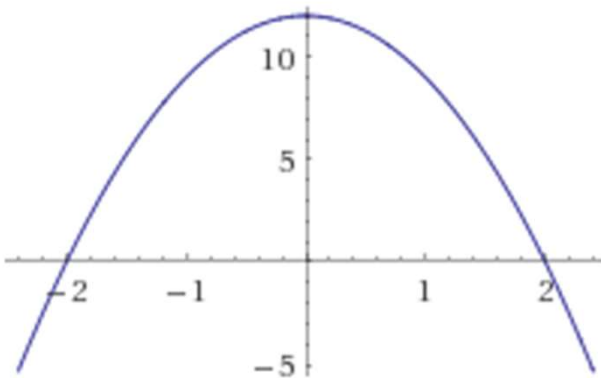
a) $f(x) = (x - 2)(x + 7)$



x -intercepts $(2, 0)$ and $(-7, 0)$;
 y -intercept $(0, -14)$;
vertex at $x = -2.5$ $(-2.5, -20.25)$.

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

b) $h(x) = -3(x - 2)(x + 2)$



vertex $(0, 12)$;
axis of symmetry at $x = 0$;
 y -intercept $(0, 12)$;
 x -intercepts $(-2, 0)$ and $(2, 0)$.

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