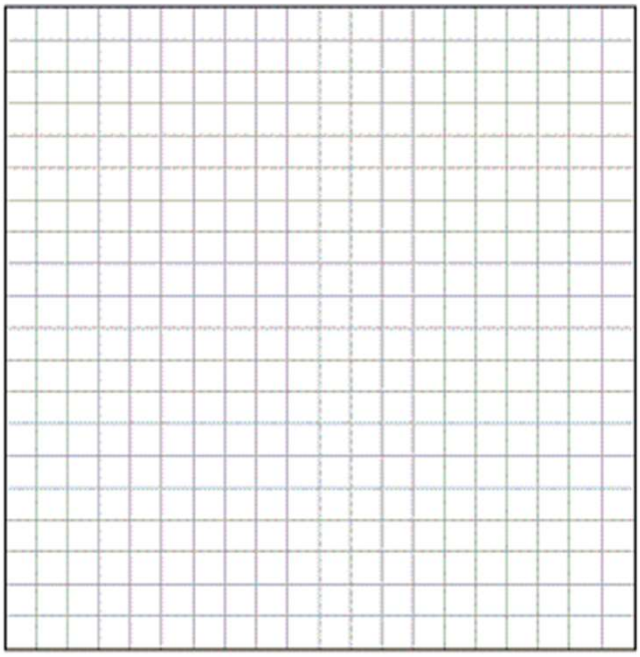
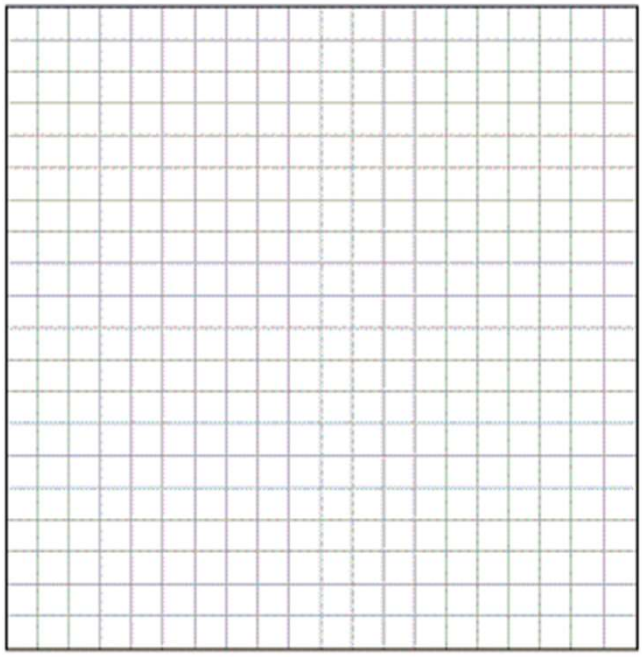
Sketch Quadratic Graphs

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

$a)\ f(x) = -(x+2)(x-5)$



$b)\ g(x) = x^2 - 5x - 24$



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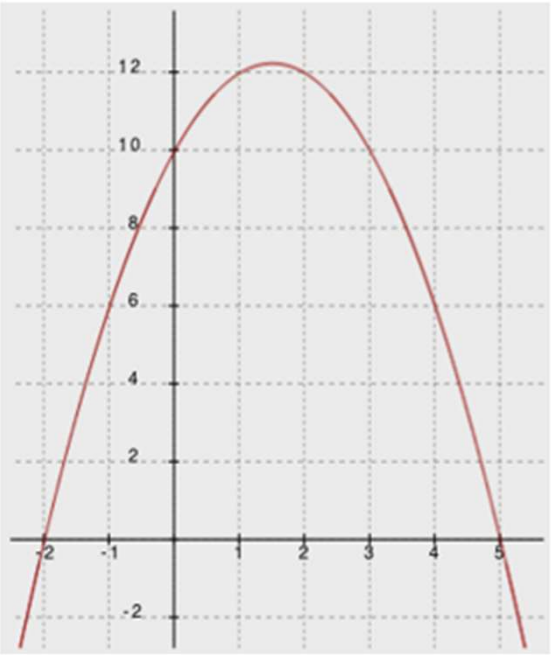

x-intercepts $(-2, 0)$ $(5, 0)$;
vertex at $x = 1.5$ $(1.5, 12.25)$;
y-intercept $(0, 10)$;
end behavior: this graph opens down
(as x approaches $\pm\infty$, y approaches $-\infty$)

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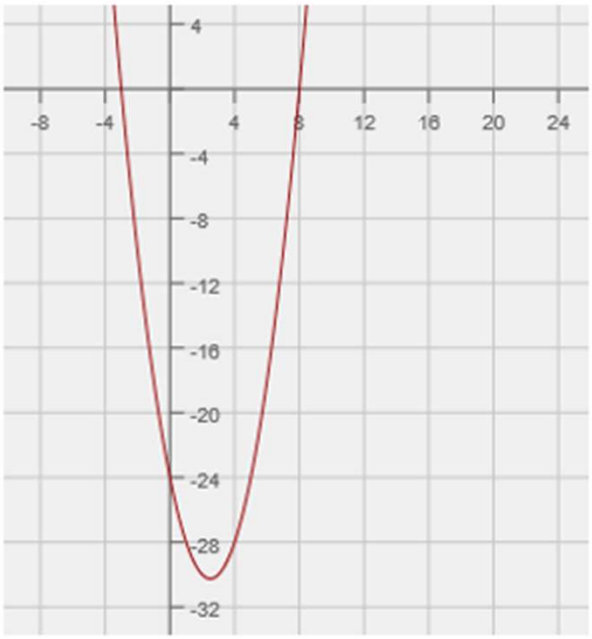

x-intercepts $(-3, 0)$ $(8, 0)$;
vertex at $x = 2.5$ $(2.5, -30.25)$;
y-intercept $(0, -24)$;
end-behavior: this graph opens up
(as x approaches $\pm\infty$, y approaches ∞)