

Calc. 5.4 Graphing Functions

③ $y\text{-int} = -10$

Inc: $(-6, 3)$

Dec: $(-\infty, -6); (3, \infty)$

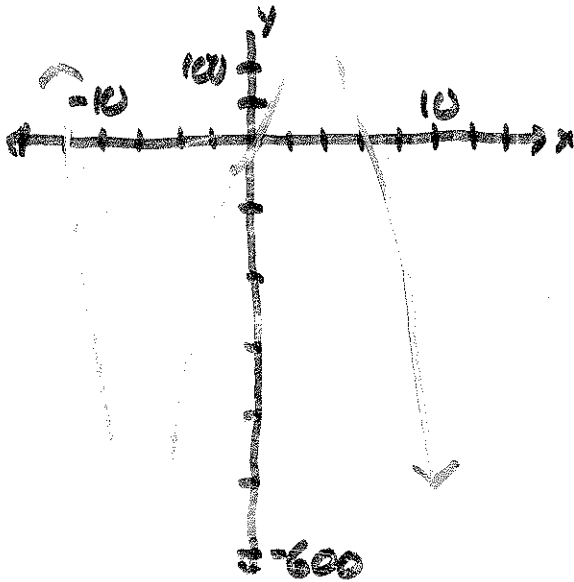
rel. max: $(3, 179)$

rel. min: $(-6, -550)$

inflection pt: $(-\frac{3}{2}, -185.5)$

concave up $(-\infty, -\frac{3}{2})$

concave down $(-\frac{3}{2}, \infty)$



④ $y\text{-int} = -1$

Inc: $(-\infty, -1); (6, \infty)$

Dec: $(-1, 6)$

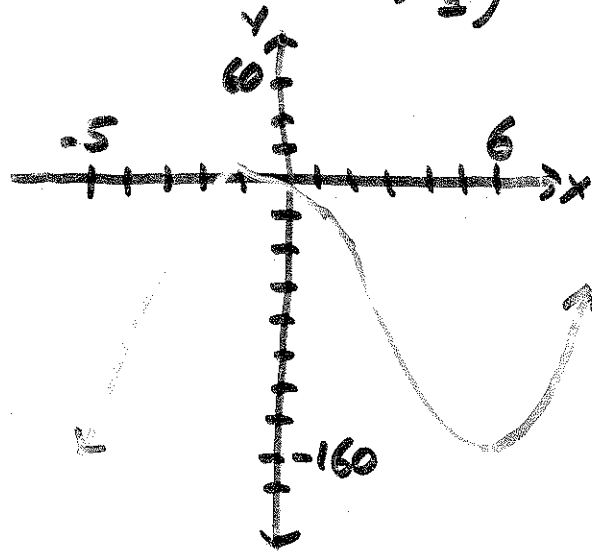
rel. max: $(-1, 8.5)$

rel. min: $(6, -163)$

inflection pt: $(\frac{5}{2}, -77.25)$

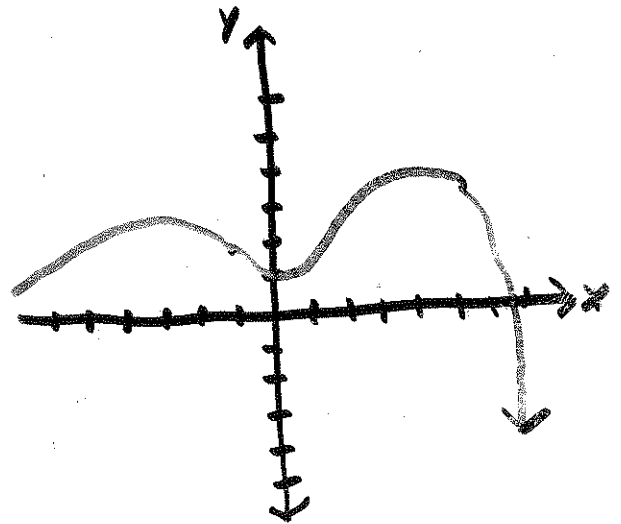
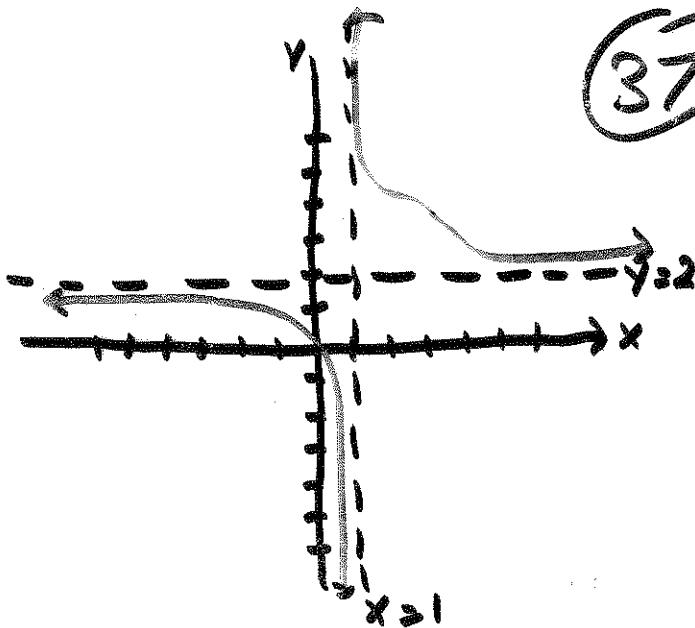
concave up $(\frac{5}{2}, \infty)$

concave down $(-\infty, \frac{5}{2})$



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⑨ y -int. = 80 x -int. $\pm\sqrt{20}$; ± 2

Inc. $(-\sqrt{20}, 0)$ $(\sqrt{20}, \infty)$

Dec. $(-\infty, -\sqrt{20})$ $(0, \sqrt{20})$

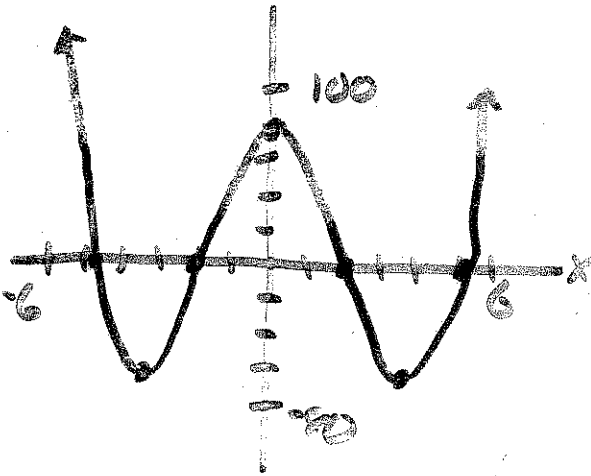
rel. max $(0, 80)$

rel. min $(-\sqrt{20}, -64)$; $(\sqrt{20}, -64)$

inflection pts $(-2, 0)$ $(2, 0)$

concave up $(-\infty, -2)$ $(2, \infty)$

concave down $(-2, 2)$



⑩ x -int. = 0; $\pm\sqrt{15}$

y -int. = 0

Inc. $(-\infty, -3)$ $(3, \infty)$

Dec. $(-3, 0)$ $(0, 3)$

rel. max. $(-3, 162)$

rel. min. $(3, -162)$

inflection pt. $(-\frac{3}{\sqrt{2}}, 100.23)$

$(0, 0)$; $(\frac{3}{\sqrt{2}}, -100.23)$

concave up. $(-\frac{3}{\sqrt{2}}, 0)$; $(\frac{3}{\sqrt{2}}, \infty)$

concave down $(-\infty, -\frac{3}{\sqrt{2}})$; $(0, \frac{3}{\sqrt{2}})$

