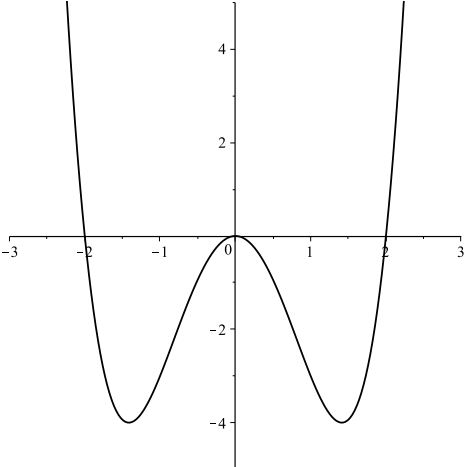


**Example 1.** Make a rough sketch of the *second* derivative of the following graph





**Example 2.** In Example 2 from Section 2.3 we had the following:

$$\begin{array}{ll} f(140) = 120 & 140 \text{ lb patient , 120 mg dose} \\ f'(140) = 3 & 3 \text{ mg/lb change in dosage per pound} \end{array}$$

and we used it to estimate  $f(145)$  as follows:

$$\begin{array}{l} f(145) \approx 120 + 3(5) \\ y_0 + m\Delta x \end{array}$$

Suppose we add some additional information to this. Suppose we know that  $f''(140) = 0.2$ . Is the estimate we found earlier for  $f(145)$  too high or too low?