

**The Shape of a Graph (4.4)**

**Finding Values of Inflection:** Find the values of inflection for each function. State the intervals on which the graph is concave up/concave down.

1)  $f(x) = x^4 - 2x^3 + 3$

2)  $f(x) = \frac{x^2}{(x-2)^2}$

**f''****f'****x****y****f''****f'****x****y**

**The Shape of a Graph:** Find the intervals on which  $f$  is increasing or decreasing. Find the local maximum and minimum values of  $f$ . Find the intervals of concavity and the inflection points.

3)  $f(x) = \frac{2x^2}{x^2 - 1}$

4)  $f(x) = x - \cos x, 0 \leq x \leq 2\pi$

**f''**

**f'**

**x**

**y**

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**f''**

**f'**

**x**

**y**

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