Newton's Method

Use two iterations of Newton's Method to approximate the real zeros of each function. Use the provided initial guess.

1) \( y = \cos 3x - 3x \)
   \[ \text{Guess: 0.4} \]

2) \( y = x^5 - 2x^3 + x - 4 \)
   \[ \text{Guess: 1.8} \]

Use Newton's Method to approximate the \( x \)-coordinates where the two functions intersect.

3) \( y = -x^3 + x^2 + 1 \)
   \( y = x^5 - 2x^3 - 4 \)

4) \( y = x^4 - x^3 - 3x^2 - 1 \)
   \( y = -x^4 + 2x^3 + 2x^2 - 6x + 3 \)

For each problem, use Newton's Method to approximate the positive root.

5) \( \sqrt[5]{4} \)

6) \( \sqrt[5]{7} \)
Newton's Method

Use two iterations of Newton's Method to approximate the real zeros of each function. Use the provided initial guess.

1) \( y = \cos 3x - 3x \)
   Guess: 0.4

2) \( y = x^5 - 2x^3 + x - 4 \)
   Guess: 1.8

3) \( y = -x^3 + x^2 + 1 \)
   \( y = x^5 - 2x^3 - 4 \)

4) \( y = x^4 - x^3 - 3x^2 - 1 \)
   \( y = -x^4 + 2x^3 + 2x^2 - 6x + 3 \)

For each problem, use Newton's Method to approximate the positive root.

5) \( \sqrt[5]{4} \)
   \( \sim 1.3195 \)

6) \( \sqrt[5]{7} \)
   \( \sim 1.4758 \)

Create your own worksheets like this one with Infinite Calculus. Free trial available at KutaSoftware.com