<u>Finding Real Roots Given an Equation (Use your Graphing Calculator)</u>

1. $y = x^3 + 3x^2 - 16x - 48$

Leading coefficient:

End behaviors:

Total number of roots:

# of Real Roots:

# of Imaginary Roots:

Find the Real Roots using your calculator:

# of Relative Min: Find them (you may have to adjust your window):

# of Relative Max: Find them (you may have to adjust your window):

2. $y = -.8x^4 + 2.8x^3 + 18.8x^2 - 32.8x - 48$

Leading coefficient:

End behaviors:

Total number of roots:

# of Real Roots:

# of Imaginary Roots:

Find the Real Roots using your calculator:

# of Relative Min: Find them (you may have to adjust your window):

# of Relative Max: Find them (you may have to adjust your window):

3. $y = .5x^4 - 2.75x^3 - 5.5x^2 - 24.75x - 90$

Leading coefficient:

End behavoiors:

Total number of roots:

# of Real Roots:

# of Imaginary Roots:

Find the Real Roots using your calculator:

4. $y = -x^3 + 3.25x^2 - 2x + 6.5$

Leading coefficient:

End behaviors:

Total number of roots:

# of Real Roots:

# of Imaginary Roots:

Find the Real Roots using your calculator:

# of Relative Min: Find them (you may have to adjust your window):

# of Relative Max: Find them (you may have to adjust your window):

5. $y = .25x^4 + .45x^3 - 3.17x^2 + 2.25x - 22.1$

Leading coefficient:

End behaviors:

Total number of roots:

# of Real Roots:

# of Imaginary Roots:

Find the Real Roots using your calculator:

# of Relative Min: Find them (you may have to adjust your window):

# of Relative Max: Find them (you may have to adjust your window):

6. $y = -.02x^5 + .109x^4 + .733x^3 - .9168x^2 + .753x - 1.026$

Leading coefficient:

End behaviors:

Total number of roots:

# of Real Roots:

# of Imaginary Roots:

Find the Real Roots using your calculator: