

Name : _____

Score : _____

Teacher : _____

Date : _____

Identify Relative Extrema

Find all relative extrema for each function.

1) $y = x^2 + 8x + 13$

2) $y = 3x^4 - 16x^3 + 22$

3) $y = x^3 + 6x^2 + 12x + 7$

4) $y = -x^2 + 4x - 13$

5) $y = x^2 - 10x - 8$

6) $y = 3x^4 + 4x^3 - 120x^2 + 13$

7) $y = -x^3 + 15x^2 - 75x + 5$

8) $y = -x^2 - 8x - 7$

9) $y = -3x^4 - 16x^3 - 18x^2 - 15$

10) $y = x^3 - 9x^2 + 27x + 18$



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Identify Relative Extrema

Find all relative extrema for each function.

1) $y = x^2 + 8x + 13$

Relative Minimum: (-4, -3)

No Relative Maximum.

2) $y = 3x^4 - 16x^3 + 22$

No Relative Maximum.

Relative Minimum: (4, -234)

3) $y = x^3 + 6x^2 + 12x + 7$

No Relative Extrema

4) $y = -x^2 + 4x - 13$

Relative Maximum: (2, -9)

No Relative Minimum.

5) $y = x^2 - 10x - 8$

Relative Minimum: (5, -33)

No Relative Maximum.

6) $y = 3x^4 + 4x^3 - 120x^2 + 13$

Relative Maximum: (0, 13)

Relative Minimum: (-5, -1612), (4, -883)

7) $y = -x^3 + 15x^2 - 75x + 5$

No Relative Extrema

8) $y = -x^2 - 8x - 7$

Relative Maximum: (-4, 9)

No Relative Minimum.

9) $y = -3x^4 - 16x^3 - 18x^2 - 15$

Relative Maximum: (-3, 12), (0, -15)

Relative Minimum: (-1, -20)

10) $y = x^3 - 9x^2 + 27x + 18$

No Relative Extrema

