

Name : _____

Score : _____

Teacher : _____

Date : _____

Identify Relative Extrema

Find all relative extrema for each function.

1) $y = 2x^3 + 15x^2 + 24x - 17$

2) $y = -x^2 - 24$

3) $y = -3x^4 + 8x^3 + 90x^2 - 7$

4) $y = x^2 + 6x + 7$

5) $y = x^4 - 8x^3 + 10x^2 - 5$

6) $y = 3x^4 - 8x^3 - 18x^2 + 21$

7) $y = -x^2 + 4x - 19$

8) $y = -x^4 - 12x^3 - 40x^2 - 11$

9) $y = 2x^3 + 9x^2 - 24x + 13$

10) $y = -x^3 + 3x^2 + 45x - 24$



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Identify Relative Extrema

Find all relative extrema for each function.

1) $y = 2x^3 + 15x^2 + 24x - 17$

Relative Maximum: (-4, -1)

Relative Minimum: (-1, -28)

2) $y = -x^2 - 24$

Relative Maximum: (0, -24)

No Relative Minimum.

3) $y = -3x^4 + 8x^3 + 90x^2 - 7$

Relative Maximum: (-3, 344), (5, 1368)

Relative Minimum: (0, -7)

4) $y = x^2 + 6x + 7$

Relative Minimum: (-3, -2)

No Relative Maximum.

5) $y = x^4 - 8x^3 + 10x^2 - 5$

Relative Maximum: (1, -2)

Relative Minimum: (0, -5), (5, -130)

6) $y = 3x^4 - 8x^3 - 18x^2 + 21$

Relative Maximum: (0, 21)

Relative Minimum: (-1, 14), (3, -114)

7) $y = -x^2 + 4x - 19$

Relative Maximum: (2, -15)

No Relative Minimum.

8) $y = -x^4 - 12x^3 - 40x^2 - 11$

Relative Maximum: (-5, -136), (0, -11)

Relative Minimum: (-4, -139)

9) $y = 2x^3 + 9x^2 - 24x + 13$

Relative Maximum: (-4, 125)

Relative Minimum: (1, 0)

10) $y = -x^3 + 3x^2 + 45x - 24$

Relative Maximum: (5, 151)

Relative Minimum: (-3, -105)

