

Name : _____

Score : _____

Teacher : _____

Date : _____

Identify Relative Extrema

Find all relative extrema for each function.

1) $y = -2x^3 + 21x^2 - 60x + 21$

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

3) $y = 3x^4 + 8x^3 + 17$

4) $y = x^2 - 10x + 14$

5) $y = 3x^4 - 4x^3 - 36x^2 - 19$

6) $y = x^3 - 3x^2 - 8$

7) $y = x^4 - 4x^3 - 20x^2 - 17$

8) $y = -x^2 - 4x - 18$

9) $y = 3x^4 - 4x^3 - 72x^2 + 12$

10) $y = x^2 + 8x + 6$



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Identify Relative Extrema

Find all relative extrema for each function.

1) $y = -2x^3 + 21x^2 - 60x + 21$

Relative Maximum: (5, -4)

Relative Minimum: (2, -31)

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

Relative Maximum: (1, -12)

No Relative Minimum.

3) $y = 3x^4 + 8x^3 + 17$

No Relative Maximum.

Relative Minimum: (-2, 1)

4) $y = x^2 - 10x + 14$

Relative Minimum: (5, -11)

No Relative Maximum.

5) $y = 3x^4 - 4x^3 - 36x^2 - 19$

Relative Maximum: (0, -19)

Relative Minimum: (-2, -83), (3, -208)

6) $y = x^3 - 3x^2 - 8$

Relative Maximum: (0, -8)

Relative Minimum: (2, -12)

7) $y = x^4 - 4x^3 - 20x^2 - 17$

Relative Maximum: (0, -17)

Relative Minimum: (-2, -49), (5, -392)

8) $y = -x^2 - 4x - 18$

Relative Maximum: (-2, -14)

No Relative Minimum.

9) $y = 3x^4 - 4x^3 - 72x^2 + 12$

Relative Maximum: (0, 12)

Relative Minimum: (-3, -285), (4, -628)

10) $y = x^2 + 8x + 6$

Relative Minimum: (-4, -10)

No Relative Maximum.

