

Name : _____

Score : _____

Teacher : _____

Date : _____

Identify Absolute Extrema

Find all absolute extrema for each function over the given interval.

1) $y = x^3 + 6x^2 + 12x + 11$; $(-5, 0)$

2) $y = -x^3 - 9x^2 - 27x + 7$; $(-6, 0)$

3) $y = -x^2 + 6x + 5$; $(1, 4)$

4) $y = x^4 + 8x^3 + 10x^2 + 23$; $(-7, 2)$

5) $y = -2x^3 + 21x^2 - 72x - 11$; $(2, 6)$

6) $y = x^2 + 10x - 5$; $(-6, -2)$

7) $y = -x^2 - 2x + 8$; $(-4, 0)$

8) $y = -x^4 + 2x^2 + 13$; $(-4, 2)$

9) $y = x^4 - 18x^2 - 21$; $(-6, 6)$

10) $y = x^2 - 10x + 21$; $(4, 8)$



Name : _____

Score : _____

Teacher : _____

Date : _____

Identify Absolute Extrema

Find all absolute extrema for each function over the given interval.

1) $y = x^3 + 6x^2 + 12x + 11$; $(-5, 0)$

Absolute Minimum: $(-5, -24)$

Absolute Maximum: $(0, 11)$

2) $y = -x^3 - 9x^2 - 27x + 7$; $(-6, 0)$

Absolute Minimum: $(0, 7)$

Absolute Maximum: $(-6, 61)$

3) $y = -x^2 + 6x + 5$; $(1, 4)$

Absolute Minimum: $(1, 10)$

Absolute Maximum: $(3, 14)$

4) $y = x^4 + 8x^3 + 10x^2 + 23$; $(-7, 2)$

Absolute Minimum: $(-5, -102)$

Absolute Maximum: $(-7, 170)$

5) $y = -2x^3 + 21x^2 - 72x - 11$; $(2, 6)$

Absolute Minimum: $(6, -119)$

Absolute Maximum: $(2, -87)$

6) $y = x^2 + 10x - 5$; $(-6, -2)$

Absolute Minimum: $(-5, -30)$

Absolute Maximum: $(-2, -21)$

7) $y = -x^2 - 2x + 8$; $(-4, 0)$

Absolute Minimum: $(-4, 0)$

Absolute Maximum: $(-1, 9)$

8) $y = -x^4 + 2x^2 + 13$; $(-4, 2)$

Absolute Minimum: $(-4, -211)$

Absolute Maximum: $(1, 14)$

9) $y = x^4 - 18x^2 - 21$; $(-6, 6)$

Absolute Minimum: $(-3, -102)$

Absolute Maximum: $(6, 627)$

10) $y = x^2 - 10x + 21$; $(4, 8)$

Absolute Minimum: $(5, -4)$

Absolute Maximum: $(8, 5)$

