

Extreme Value of Functions

Date _____ Period _____

Find the absolute extrema.

1) $y = x^3 + 6x^2 + 9x + 3; -4 \leq x \leq 0$

2) $y = x^4 - 3x^2 + 4; -1 \leq x \leq 1$

3) $y = \frac{x^2}{3x - 6}; 3 \leq x \leq 6$

4) $y = (x + 2)^{\frac{2}{3}}; -4 \leq x \leq 0$

5) $y = \sin 2x; \frac{\pi}{3} \leq x \leq 2\pi$

6) $y = x - 2\sin x; 0 \leq x \leq 2\pi$

7) $y = e^{x^2}; -1 \leq x \leq 2$

8) $y = xe^{2x}; 0 \leq x \leq 4$