

Type b Critical Numbers

FALL 2015

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Name _____

In each exercise, determine the intervals on which $f(x)$ is increasing/decreasing, and identify all relative maximums and minimums.

1. $f(x) = \frac{16}{5}x^{\frac{5}{3}} + x^{\frac{2}{3}} + 2$

2. $f(x) = x^{\frac{8}{3}} - 4x^{\frac{2}{3}} + 4$

3. $f(x) = x^{\frac{9}{5}} - 9x^{\frac{4}{5}} + 1$

4. $f(x) = 2x^{\frac{14}{5}} - 7x^{\frac{4}{5}} - 2$

5. $f(x) = 2x^{\frac{5}{3}} - 5x^{\frac{2}{3}}$

6. $f(x) = x^{\frac{8}{3}} - x^{\frac{2}{3}} + 5$

7. $f(x) = \frac{1}{7}x^{\frac{14}{5}} - 2x^{\frac{4}{5}} + 1$

8. $f(x) = 4x^{\frac{9}{5}} + 9x^{\frac{4}{5}} + \frac{1}{2}$

9. $f(x) = \frac{1}{2}x^{\frac{8}{3}} - 8x^{\frac{2}{3}} - 2$