Name_____

Evaluating Limits

Date_____ Period____

Evaluate each limit.

1) $\lim\limits_{x\to 0} -1$

2) $\lim\limits_{x\to -4} (-x - 4)$

3) $\lim\limits_{x\to -2} (2x + 3)$

4) $\lim\limits_{x\to 3} (-x^3 + 13x^2 - 56x + 81)$

5) $\lim\limits_{x\to 2} (x^3 - 2x^2 - 2)$

6) $\lim\limits_{x\to 5} -\sqrt{2x + 1}$

7) $\lim\limits_{x\to -2} \sqrt[3]{-2x - 3}$

8) $\lim\limits_{x\to -3} \dfrac{x - 3}{x^2 + 2x + 2}$

9) $\lim\limits_{x\to 2} \dfrac{x - 6}{x^2 - 4x + 3}$

10) $\lim\limits_{x\to \frac{\pi}{6}} \cos(x)$

Critical thinking questions:

11) Give an example of a limit that evaluates to 5.

12) Give an example of a limit of a quadratic function where the limit evaluates to 16.

Name_____

Evaluating Limits

Date_____ Period_____

Evaluate each limit.

1) $\lim\limits_{x \to 0} -1$

    −1

2) $\lim\limits_{x \to -4} (-x - 4)$

    0

3) $\lim\limits_{x \to -2} (2x + 3)$

    −1

4) $\lim\limits_{x \to 3} (-x^3 + 13x^2 - 56x + 81)$

    3

5) $\lim\limits_{x \to 2} (x^3 - 2x^2 - 2)$

    −2

6) $\lim\limits_{x \to 5} -\sqrt{2x + 1}$

    $-\sqrt{11}$

7) $\lim\limits_{x \to -2} \sqrt[3]{-2x - 3}$

    1

8) $\lim\limits_{x \to -3} \dfrac{x - 3}{x^2 + 2x + 2}$

    $-\dfrac{6}{5}$

9) $\lim\limits_{x \to 2} \dfrac{x - 6}{x^2 - 4x + 3}$

    4

10) $\lim\limits_{x \to \frac{\pi}{6}} \cos(x)$

    $\dfrac{\sqrt{3}}{2}$

Critical thinking questions:

11) Give an example of a limit that evaluates to 5.

    Many answers. Ex: $\lim\limits_{x \to 5} x$

12) Give an example of a limit of a quadratic function where the limit evaluates to 16.

    Many answers. Ex: $\lim\limits_{x \to 4} x^2$