

Name : \_\_\_\_\_

Score : \_\_\_\_\_

Teacher : \_\_\_\_\_

Date : \_\_\_\_\_

## Evaluation of Limits

Evaluate the given limits. Round to the nearest ten-thousandth.

$$1) \lim_{x \rightarrow 4} \frac{x + 2}{x^3 + x^2 - 21x - 45}$$

$$2) \lim_{x \rightarrow \pi} \cos(x + 1)$$

$$3) \lim_{x \rightarrow 1} x^2 + 2x - 3$$

$$4) \lim_{x \rightarrow -\frac{5\pi}{4}} \sin(x - 1)$$

$$5) \lim_{x \rightarrow 3} 3^x + 5$$

$$6) \lim_{x \rightarrow 6} x^2 - 3x$$

$$7) \lim_{x \rightarrow 3} \frac{x - 3}{x^2 + x - 2}$$

$$8) \lim_{x \rightarrow -1} e^{x + 3}$$

$$9) \lim_{x \rightarrow 0} \frac{x + 4}{x^2 + 8x + 15}$$

$$10) \lim_{x \rightarrow -7} x^2 + 9x + 20$$



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## Evaluation of Limits

Evaluate the given limits. Round to the nearest ten-thousandth.

1) 
$$\lim_{x \rightarrow 4} \frac{x + 2}{x^3 + x^2 - 21x - 45}$$

-0.1224

2) 
$$\lim_{x \rightarrow \pi} \cos(x + 1)$$

-0.5403

3) 
$$\lim_{x \rightarrow 1} x^2 + 2x - 3$$

0

4) 
$$\lim_{x \rightarrow -\frac{5\pi}{4}} \sin(x - 1)$$

0.9771

5) 
$$\lim_{x \rightarrow 3} 3^{x+5}$$

6561

6) 
$$\lim_{x \rightarrow 6} x^2 - 3x$$

18

7) 
$$\lim_{x \rightarrow 3} \frac{x - 3}{x^2 + x - 2}$$

0

8) 
$$\lim_{x \rightarrow -1} e^{x+3}$$

7.3891

9) 
$$\lim_{x \rightarrow 0} \frac{x + 4}{x^2 + 8x + 15}$$

0.2667

10) 
$$\lim_{x \rightarrow -7} x^2 + 9x + 20$$

6

