

Name : _____

Score : _____

Teacher : _____

Date : _____

Evaluation of Limits

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

$$1) \lim_{x \rightarrow 0} \frac{3\cos(4x + \pi/2)}{4\cos(4x + \pi/2)}$$

$$2) \lim_{x \rightarrow 0} \frac{2\sin(x)}{3x}$$

$$3) \lim_{x \rightarrow 0} \frac{4 - 4\cos^2(4x)}{2x}$$

$$4) \lim_{x \rightarrow 0} \frac{\cos^2(4x) - 1}{x}$$

$$5) \lim_{x \rightarrow 0} \frac{3\sin(2x)}{3\sin(x)}$$

$$6) \lim_{x \rightarrow 0} \frac{3\cos(x)3x}{2\sin(4x)}$$

$$7) \lim_{x \rightarrow 0} \frac{3 - 3\sin(\pi/2 + 3x)}{2x}$$

$$8) \lim_{x \rightarrow 0} \frac{4\sin^2(x)}{4x^2}$$

$$9) \lim_{x \rightarrow 0} \frac{3x}{2\sin(2x)}$$

$$10) \lim_{x \rightarrow 0} \frac{2\cos(4x) - 2}{x}$$



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

1)
$$\lim_{x \rightarrow 0} \frac{3\cos(4x + \pi/2)}{4\cos(4x + \pi/2)}$$

$$\frac{3}{4}$$

2)
$$\lim_{x \rightarrow 0} \frac{2\sin(x)}{3x}$$

$$\frac{2}{3}$$

3)
$$\lim_{x \rightarrow 0} \frac{4 - 4\cos^2(4x)}{2x}$$

$$0$$

4)
$$\lim_{x \rightarrow 0} \frac{\cos^2(4x) - 1}{x}$$

$$0$$

5)
$$\lim_{x \rightarrow 0} \frac{3\sin(2x)}{3\sin(x)}$$

$$2$$

6)
$$\lim_{x \rightarrow 0} \frac{3\cos(x)3x}{2\sin(4x)}$$

$$\frac{9}{8}$$

7)
$$\lim_{x \rightarrow 0} \frac{3 - 3\sin(\pi/2 + 3x)}{2x}$$

$$0$$

8)
$$\lim_{x \rightarrow 0} \frac{4\sin^2(x)}{4x^2}$$

$$1$$

9)
$$\lim_{x \rightarrow 0} \frac{3x}{2\sin(2x)}$$

$$\frac{3}{4}$$

10)
$$\lim_{x \rightarrow 0} \frac{2\cos(4x) - 2}{x}$$

$$0$$

