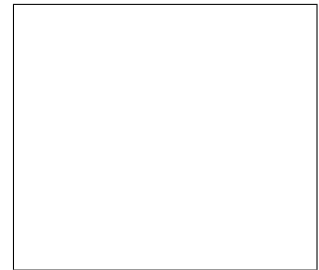


Calculus Homework Assignment 1

Class 班: _____

Student Number 學號: _____

Name 姓名: _____



1. Find the domain of $y = \frac{x+3}{4-\sqrt{x^2-9}}$. [§1.1 #21]

2. Say whether the function is even, odd, or neither. Give reasons for your answer.

a. $\sin 2x$

b. $\cos 3x$

[§1.1 #59,61]

3. $f(x) = \sqrt{x+1}$, $g(x) = \frac{1}{x}$

a. Write formulas for $f \circ g$ and $g \circ f$.

b. Find the domains and ranges of $f \circ g$ and $g \circ f$.

[§1.2 #17]

4. Let $f(x) = \frac{x}{x-2}$. Find a function $y = g(x)$ so that $f \circ g(x) = x$.

[§1.2 #19]

Calculus Homework Assignment 1

5. Solve for the angle θ , where $0 \leq \theta \leq 2\pi$.

$$\sin^2 \theta = \frac{3}{4}$$

[§1.3 #51]

6. Solve for the angle θ , where $0 \leq \theta \leq 2\pi$.

$$\sin 2\theta - \cos \theta = 0$$

[§1.3 #53]

7. Find (a) the slope of the curve at the given point P , and (b) an equation of the tangent line at P .

$$y = x^2 - 2x - 3, \quad P(2, -3)$$

[§2.1 #11]

8. Find (a) the slope of the curve at the given point P , and (b) an equation of the tangent line at P .

$$y = \sqrt{x}, \quad P(4, 2)$$

[§2.1 #17]

(The end 結束)