Formula for Delta y

Find Delta y = f(x + Delta x) - f(x).

1. f(x) = 4sin(-6x+3)

2. f(x) = (x^2+1)/(x-2)

3. f(x) = (x^2-6x)/(2x^2-12x+18)

4. f(x) = -2cos(3x-12)

5. f(x) = 1(3x^2+1)^5

6. f(x) = 1(-x^3-x)^-3

Formula for Delta y

Find Delta y = f(x + Delta x) - f(x).

7. f(x) = (1/2)/(x^2-4x+4)+(-3)/(x^2)

8. f(x) = 2x^3-x+4

9. f(x) = x^4-2x^2+3

10. f(x) = -x^2-3x-5

Formula for Delta y

Answer Key

Find Delta y = f(x + Delta x) - f(x).

1. f(x) = 4sin(-6x+3)

Delta y = f(x + Delta x) - f(x)

Substitute the complete incremented input.

Delta y = 4sin(-6(x + Delta x)+3) - (4sin(-6x+3))

2. f(x) = (x^2+1)/(x-2)

Delta y = f(x + Delta x) - f(x)

Substitute the complete incremented input.

Delta y = ((x + Delta x)^2+1)/((x + Delta x)-2) - ((x^2+1)/(x-2))

x-2 != 0

(x + Delta x)-2 != 0

3. f(x) = (x^2-6x)/(2x^2-12x+18)

Delta y = f(x + Delta x) - f(x)

Substitute the complete incremented input.

Delta y = ((x + Delta x)^2-6(x + Delta x))/(2(x + Delta x)^2-12(x + Delta x)+18) - ((x^2-6x)/(2x^2-12x+18))

2x^2-12x+18 != 0

2(x + Delta x)^2-12(x + Delta x)+18 != 0

Formula for Delta y

Answer Key

Find Delta y = f(x + Delta x) - f(x).

4. f(x) = -2cos(3x-12)

Delta y = f(x + Delta x) - f(x)

Substitute the complete incremented input.

Delta y = -2cos(3(x + Delta x)-12) - (-2cos(3x-12))

5. f(x) = 1(3x^2+1)^5

Delta y = f(x + Delta x) - f(x)

Substitute the complete incremented input.

Delta y = 1(3(x + Delta x)^2+1)^5 - (1(3x^2+1)^5)

6. f(x) = 1(-x^3-x)^-3

Delta y = f(x + Delta x) - f(x)

Substitute the complete incremented input.

Delta y = 1(-(x + Delta x)^3-(x + Delta x))^-3 - (1(-x^3-x)^-3)

-x^3-x != 0

-(x + Delta x)^3-(x + Delta x) != 0

Formula for Delta y

Answer Key

Find Delta y = f(x + Delta x) - f(x).

7. f(x) = (1/2)/(x^2-4x+4)+(-3)/(x^2)

Delta y = f(x + Delta x) - f(x)

Substitute the complete incremented input.

Delta y = (1/2)/((x + Delta x)^2-4(x + Delta x)+4)+(-3)/((x + Delta x)^2) - ((1/2)/(x^2-4x+4)+(-3)/(x^2))

x^2-4x+4 != 0

x^2 != 0

(x + Delta x)^2-4(x + Delta x)+4 != 0

(x + Delta x)^2 != 0

8. f(x) = 2x^3-x+4

Delta y = f(x + Delta x) - f(x)

Substitute the complete incremented input.

Delta y = 2(x + Delta x)^3-(x + Delta x)+4 - (2x^3-x+4)

9. f(x) = x^4-2x^2+3

Delta y = f(x + Delta x) - f(x)

Substitute the complete incremented input.

Delta y = (x + Delta x)^4-2(x + Delta x)^2+3 - (x^4-2x^2+3)

Formula for Delta y

Answer Key

Find Delta y = f(x + Delta x) - f(x).

10. f(x) = -x^2-3x-5

Delta y = f(x + Delta x) - f(x)

Substitute the complete incremented input.

Delta y = -(x + Delta x)^2-3(x + Delta x)-5 - (-x^2-3x-5)