1. (1 pt) Given the function $f(x) = 2 + 8x^2$, calculate the following values:
$f(a) =$ _____
$f(a+h) =$ _____
$\frac{f(a+h)-f(a)}{h} =$ _____

Answer(s) submitted:

- `2+8a^2`
- `2+8(a+h)^2`
- `8(2a + h)`

(correct)
Correct Answers:

- `8*a**2+2`
- `8*(a+h)**2+2`
- `8*2*a+8*h`

2. (1 pt) The domain of the function

$$f(x) = \sqrt{15-3x}$$

is _____.

Note: Write your answer in interval notation. If the answer includes more than one interval write the intervals separated by the union symbol, U. If the answer is $-\infty$, input *-infinity* ; if the answer is ∞, input *infinity* .
Answer(s) submitted:

- `(-Inf, 5]`

(correct)
Correct Answers:

- `(-infinity,5]`

3. (1 pt) The domain of the function

$$g(t) = \sqrt[3]{t-37}$$

is _____.

Note: Write your answer in interval notation. If the answer includes more than one interval write the intervals separated by the union symbol, U. If the answer is $-\infty$, input *-infinity* ; if the answer is ∞, input *infinity* .
Answer(s) submitted:

- `(-Inf, Inf)`

(correct)
Correct Answers:

- `(-infinity,infinity)`

4. (1 pt) The domain of the function

$$f(x) = \sqrt{x^2-4}$$

is _____.

Note: Write your answer in interval notation. If the answer includes more than one interval write the intervals separated by the union symbol, U. If the answer is $-\infty$, input *-infinity* ; if the answer is ∞, input *infinity* .
Answer(s) submitted:

- `(-Inf, -2] U [2, Inf)`

(correct)
Correct Answers:

- `(-infinity,-2] U [2,infinity)`

5. (1 pt) The domain of the function

$$f(x) = \frac{1}{\sqrt{8x+16}}$$

is _____
Note: Write the answer in interval notation. If the answer includes more than one interval write the intervals separated by the union symbol, U. If needed enter $-\infty$ as - *infinity* and ∞ as *infinity* .
Answer(s) submitted:

- `(-2, Inf)`

(correct)
Correct Answers:

- `(-2,infinity)`

6. (1 pt) The domain of the function

$$g(x) = \sqrt{x(x-15)}$$

is _____
Note: Write the answer in interval notation. If the answer includes more than one interval write the intervals separated by the "union" symbol, U. If needed enter $-\infty$ as - *infinity* and ∞ as *infinity* .

Answer(s) submitted:

- `(-Inf, 0] U [15, Inf)`

(correct)
Correct Answers:

- `(-infinity,0] U [15,infinity)`

7. (1 pt) Find domain and range of the function

$$f(x) = 10\sqrt{x} - 10$$

Domain: _____
Range: _____

Note: Write the answer in interval notation. If the answer includes more than one interval write the intervals separated by the "union" symbol, U. If needed enter $-\infty$ as - *infinity* and ∞ as *infinity* .

Answer(s) submitted:

- [0, Inf)
- [-10, Inf)

(correct)

Correct Answers:

- [0,infinity)
- [-10,infinity)

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8. (1 pt) Given the function

$$f(x) = \begin{cases} x^2 + 2x, & \text{if} \quad x \leq -1 \\ x + 8, & \text{if} \quad x > -1 \end{cases}$$

Calculate the following values:
$f(-10) =$ _____
$f(-1) =$ _____
$f(5) =$ _____

Answer(s) submitted:

- 80
- -1
- 13

(correct)

Correct Answers:

- 80
- -1
- 13

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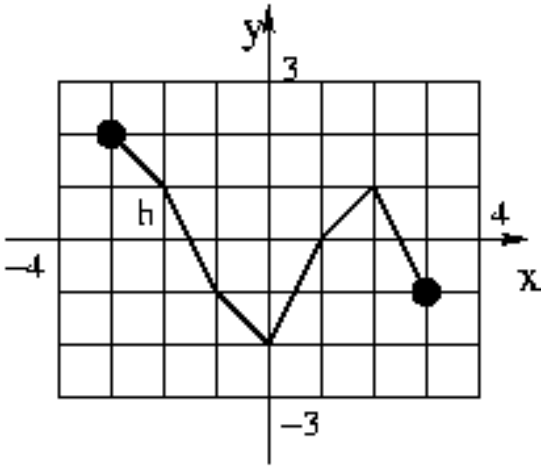
9. (1 pt) **Click on the graph to view a larger graph**
For the function $h(x)$ given in the graph



The domain of $h(x)$ is: _____
The range of $h(x)$ is: _____

Note: Write the answer in **interval notation**.

Enter each corresponding function value in each answer space below:

___1. $h(-3)$
___2. $h(-2)$
___3. $h(0)$
___4. $h(-1)$

Answer(s) submitted:

- [-3, 3]
- [-2, 2]
- 2
- 1
- -2
- -1

(correct)

Correct Answers:

- [-3,3]
- [-2,2]
- 2
- 1
- -2
- -1

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10. (1 pt) The function $f(x) = x^{-2}$ is _____ **(enter even, odd, or neither).**

Answer(s) submitted:

- even

(correct)

Correct Answers:

- EVEN

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11. (1 pt) The function $f(x) = x^2 + x$ is _____
(enter even, odd, or neither).

Answer(s) submitted:

- neither

(correct)

Correct Answers:

- NEITHER

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12. (1 pt) The function $f(x) = x^3 - x$ is _____
(enter even, odd, or neither).

Answer(s) submitted:

- odd

(correct)

Correct Answers:

- ODD

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