

# Question 1

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Find the limit

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

(if the limit exists)

1. 4

2. 2

3. 3

4. 1

5. does not exist

6. None of the above

# Question 1

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Find the limit

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

(if the limit exists)

1. 4

2. 2

3. 3

4. 1

5. does not exist

6. None of the above

1. The limit is 4

# Question 2

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Find

$$\lim_{x \rightarrow -2} \frac{x + 2}{x^3 + 8}$$

(if the limit exists)

1.  $-3/12$

2.  $3/12$

3.  $1/12$

4.  $5/12$

5. does not exist

6. None of the above

# Question 2

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Find

$$\lim_{x \rightarrow -2} \frac{x + 2}{x^3 + 8}$$

(if the limit exists)

1.  $-3/12$
  2.  $3/12$
  3.  $1/12$
  4.  $5/12$
  5. does not exist
  6. None of the above
3. The limit is  $1/12$

# Question 3

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Find

$$\lim_{x \rightarrow 9} \frac{9 - x}{3 - \sqrt{x}}$$

(if the limit exists)

- |       |                      |
|-------|----------------------|
| 1. -3 | 4. 6                 |
| 2. 5  | 5. does not exist    |
| 3. 3  | 6. None of the above |

# Question 3

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Find

$$\lim_{x \rightarrow 9} \frac{9 - x}{3 - \sqrt{x}}$$

(if the limit exists)

- |       |                      |
|-------|----------------------|
| 1. -3 | 4. 6                 |
| 2. 5  | 5. does not exist    |
| 3. 3  | 6. None of the above |
4. The limit is 6

# Question 4

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Find

$$\lim_{x \rightarrow 0} \left( \frac{1}{x\sqrt{x+1}} - \frac{1}{x} \right)$$

(if the limit exists)

- |         |                      |
|---------|----------------------|
| 1. -3   | 4. 1                 |
| 2. -1/2 | 5. does not exist    |
| 3. 3    | 6. None of the above |

# Question 4

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Find

$$\lim_{x \rightarrow 0} \left( \frac{1}{x\sqrt{x+1}} - \frac{1}{x} \right)$$

(if the limit exists)

- |         |                      |
|---------|----------------------|
| 1. -3   | 4. 1                 |
| 2. -1/2 | 5. does not exist    |
| 3. 3    | 6. None of the above |

2. The limit is -1/2



# Question 5

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An object is dropped from a helicopter at 6000ft. The height above the ground after  $t$  seconds is

$$h(t) = 6000 - 16t^2$$

Find the average velocity from  $t = 1$  to  $t = 3$ .

- |        |                      |
|--------|----------------------|
| 1. -32 | 4. -128              |
| 2. -16 | 5. -96               |
| 3. -64 | 6. None of the above |

# Question 5

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An object is dropped from a helicopter at 6000ft. The height above the ground after  $t$  seconds is

$$h(t) = 6000 - 16t^2$$

Find the average velocity from  $t = 1$  to  $t = 3$ .

- |        |                      |
|--------|----------------------|
| 1. -32 | 4. -128              |
| 2. -16 | 5. -96               |
| 3. -64 | 6. None of the above |

3. The average velocity is -64