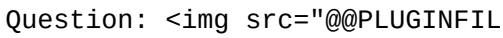
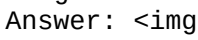
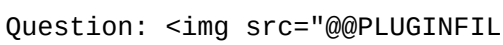
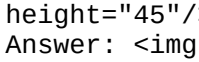
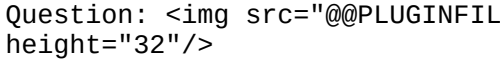
MTH282

Question: 
Answer: 

Question: 
Answer: 

Question: 
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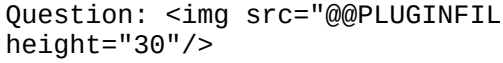
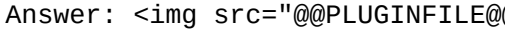
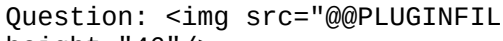
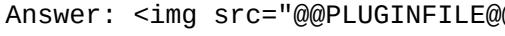
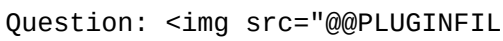
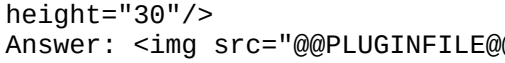
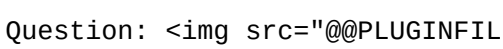
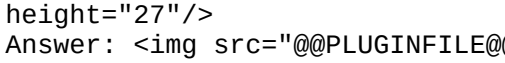
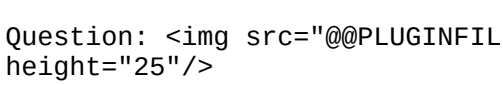
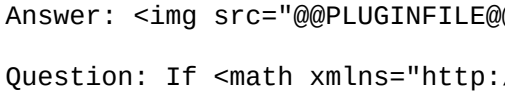
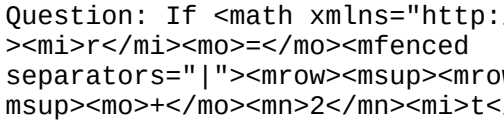
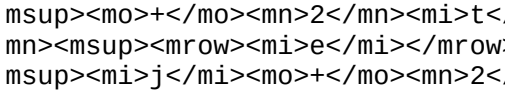
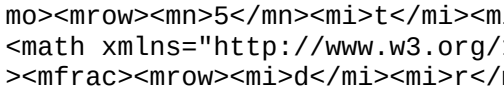
Question: 
Answer: 

Question: 
Answer: 

Question: 
Answer: 

Question: 
Answer: 

Question: If  find 
Answer: 

Question: Find the gradient of the scalar field 
Answer: 

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mn></mrow></msup><mo>-</mo><mn>2</mn><msup><mrow><mi>x</mi></mrow><mrow><mn>2</
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Find the curl <math xmlns="http://www.w3.org/1998/Math/MathML"
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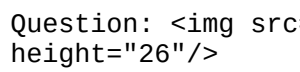
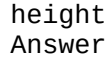
Question: 
Answer: 

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Question: Given A=1+3j-2k and B=4i-2j+4k, find |3A+2B|
Answer:

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Answer: 10i+3j+11k

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Answer: 12

Answer: twelve

Question: Given function <math xmlns="http://www.w3.org/1998/Math/MathML"
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msup><mi>y</mi><mo>+</mo><mi>y</mi><mi>z</mi></math> at the point (1, 2,-1),then
its rate of change is _____
Answer: 4i+2k

Question: The modulus of the complex number <math
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mrow><mrow><mo>(</mo><mn>3</mn><mo>-</mo><mi>i</mi><mo>)</mo></mrow></mfrac></
math> is _____
Answer: 1

Answer: one

Question: The real number <math xmlns="http://www.w3.org/1998/Math/MathML"
><mi>x</mi></math> and <math xmlns="http://www.w3.org/1998/Math/MathML"
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mi><mi>x</mi><mo>+</mo><mn>5</mn><mi>y</mi><mo>=</mo><mn>7</mn><mo>+</
mo><mn>5</mn><mi>i</mi></math> is x= ____ and y=_____
Answer: -1, 2

Question: the angle between <math xmlns="http://www.w3.org/1998/Math/MathML"
><mi>A</mi><mo>=</mo><mn>2</mn><mi>i</mi><mo>+</mo><mn>2</mn><mi>j</mi><mo>-</
mo><mi>k</mi></math> and <math xmlns="http://www.w3.org/1998/Math/MathML"
><mi>B</mi><mo>=</mo><mn>6</mn><mi>i</mi><mo>-</mo><mn>3</mn><mi>j</mi><mo>+</
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Answer: 79

Question: The projection of the vector <math
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mo><mn>7</mn><mi>k</mi></math> is ___

Answer: 19/9

Answer: 2.11

Question: The work done in moving an object along a vector <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>r</mi><mo>=</mo><mn>3</mn><mi>i</mi><mo>+</mo><mn>2</mn><mi>j</mi><mo>-</mo><mn>5</mn><mi>k</mi></math>, if the applied force is <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>F</mi><mo>=</mo><mn>2</mn><mi>i</mi><mo>-</mo><mi>j</mi><mo>-</mo><mi>k</mi></math> is _____

Answer: 9

Question: If <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>A</mi><mo>=</mo><mn>2</mn><mi>i</mi><mo>-</mo><mn>3</mn><mi>j</mi><mo>-</mo><mi>k</mi></math> and <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>A</mi><mo>=</mo><mi>i</mi><mo>+</mo><mn>4</mn><mi>j</mi><mo>-</mo><mn>2</mn><mi>k</mi></math>, then <math xmlns="http://www.w3.org/1998/Math/MathML" ><mo>(</mo><mi>A</mi><mo>+</mo><mi>B</mi><mo>)</mo><mo>x</mo><mo>(</mo><mi>A</mi><mo>-</mo><mi>B</mi><mo>)</mo></math> is _____

Answer: -20i-6j-22k

Question: The solution of <math xmlns="http://www.w3.org/1998/Math/MathML" ><mfenced separators="|"><mrow><mn>2</mn><mi>i</mi><mo>-</mo><mn>3</mn><mi>j</mi></mrow></mfenced><mo>·</mo><mo>[</mo><mfenced separators="|"><mrow><mi>i</mi><mo>+</mo><mi>j</mi><mo>-</mo><mi>k</mi></mrow></mfenced><mo>x</mo><mfenced separators="|"><mrow><mn>3</mn><mi>i</mi><mo>-</mo><mi>k</mi></mrow></mfenced><mo>]</mo></math> is _____

Answer: 4

Question: Given <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>A</mi><mo>=</mo><mi>i</mi><mrow><mrow><mi>sin</mi></mrow><mo></mo><mrow><mi>t</mi></mrow></mrow><mo>-</mo><mi>j</mi><mrow><mrow><mi>sin</mi></mrow><mo></mo><mrow><mi>t</mi></mrow></mrow><mo>+</mo><mi>k</mi></math>, the value of <math xmlns="http://www.w3.org/1998/Math/MathML" ><mfenced open="|" close="|" separators="|"><mrow><mfrac><mrow><msup><mrow><mi>d</mi></mrow><mrow><mn>2</mn></mrow></msup><mi>A</mi></mrow><mrow><mi>d</mi><msup><mrow><mi>t</mi></mrow><mrow><mn>2</mn></mrow></msup></mrow></mfrac></mrow></mfenced></math> is _____

Answer: 1

Question: The solution of <math xmlns="http://www.w3.org/1998/Math/MathML" ><mfrac><mrow><msup><mrow><mo>∂</mo></mrow><mrow><mn>2</mn></mrow></msup></mrow><mrow><mo>∂</mo><mi>x</mi><mo>∂</mo><mi>y</mi></mrow></mfrac><mo>(</mo><mi>ϕ</mi><mi>A</mi><mo>)</mo></math> at the point (2,-1,1) of the functions <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>ϕ</mi><mfenced separators="|"><mrow><mi>x</mi><mo>,</mo><mi>y</mi><mo>,</mo><mi>z</mi></mrow></mfenced><mo>=</mo><mi>x</mi><msup><mrow><mi>y</mi></mrow><mrow><mn>2</mn></mrow></msup><mi>z</mi></math> and <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>A</mi><mo>=</mo><mi>x</mi><mi>z</mi><mi>i</mi><mo>-</mo><mi>x</mi><msup><mrow><mi>y</mi></mrow><mrow><mn>2</mn></mrow></msup><mi>j</mi><mo>+</mo><mi>x</mi><msup><mrow><mi>z</mi></mrow><mrow><mn>2</mn></mrow></msup><mi>k</mi></math> is _____

Answer: 4i-2j

Question: The magnitude of the velocity of a particle which moves along the curve <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>x</mi><mo>=</mo><mn>2</mn><mrow><mrow><mi>sin</mi></mrow><mo></mo><mrow><mn>3</mn><mi>t</mi></mrow></mrow><mo>,</mo><mi> </mi><mi>y</mi>

mi><mo>=</mo><mn>2</mn><mrow><mrow><mi>cos</mi></mrow><mo></mo><mrow><mn>3</mn><mi>t</mi></mrow></mrow></math> and <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>z</mi><mo>=</mo><mn>8</mn><mi>t</mi></math> at any time <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>t</mi><mo>></mo><mn>0</mn></math> is _____
Answer: 18

Question: If <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>ϕ</mi><mo>=</mo><mn>2</mn><mi>x</mi><msup><mrow><mi>z</mi></mrow><mrow><mn>4</mn></mrow></msup><mo>-</mo><msup><mrow><mi>x</mi></mrow><mrow><mn>2</mn></mrow></msup><mo>,</mo></math> the solution of <math xmlns="http://www.w3.org/1998/Math/MathML" ><mo>∇</mo><mi>ϕ</mi></math> at point (2, -2, -1) is _____
Answer: 10i-4j-16k

Question: The solution of <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>A</mi><mo>·</mo><mo>∇</mo><mi>ϕ</mi></math> at point (1, - 1, 1)of the functions <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>A</mi><mo>=</mo><msup><mrow><mi>x</mi></mrow><mrow><mn>2</mn></mrow></msup><mi>i</mi><mo>-</mo><mn>3</mn><mi>y</mi><mi>z</mi><mi>j</mi><mo>+</mo><mi>x</mi><msup><mrow><mi>z</mi></mrow><mrow><mn>2</mn></mrow></msup></math> and <math xmlns="http://www.w3.org/1998/Math/MathML" ><msup><mrow><mi>ϕ</mi><mo>=</mo><mn>2</mn><mi>z</mi><mo>-</mo><mi>x</mi></mrow><mrow><mn>3</mn></mrow></msup><mi>y</mi></math> is _____
Answer: 5

Question: The solution of <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>A</mi><mo>×</mo><mo>∇</mo><mi>ϕ</mi></math> at point (1, - 1, 1)of the functions <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>A</mi><mo>=</mo><msup><mrow><mi>x</mi></mrow><mrow><mn>2</mn></mrow></msup><mi>i</mi><mo>-</mo><mn>3</mn><mi>y</mi><mi>z</mi><mi>j</mi><mo>+</mo><mi>x</mi><msup><mrow><mi>z</mi></mrow><mrow><mn>2</mn></mrow></msup></math> and <math xmlns="http://www.w3.org/1998/Math/MathML" ><msup><mrow><mi>ϕ</mi><mo>=</mo><mn>2</mn><mi>z</mi><mo>-</mo><mi>x</mi></mrow><mrow><mn>3</mn></mrow></msup><mi>y</mi></math> is _____
Answer: 7i-j-11k

Question: The work done in moving an object along a straight line from (3, 2, -1) to (2, -1, 4) in a force field by <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>F</mi><mo>=</mo><mn>4</mn><mi>i</mi><mo>-</mo><mn>3</mn><mi>j</mi><mo>+</mo><mn>2</mn><mi>k</mi></math>
Answer: 15

Question: If <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>A</mi><mo>=</mo><msup><mrow><mi>x</mi></mrow><mrow><mn>2</mn></mrow></msup><mi>y</mi><mi>z</mi><mi>i</mi><mo>-</mo><mn>2</mn><mi>x</mi><msup><mrow><mi>z</mi></mrow><mrow><mn>3</mn></mrow></msup><mi>j</mi><mo>+</mo><mi>x</mi><msup><mrow><mi>z</mi></mrow><mrow><mn>2</mn></mrow></msup><mi>k</mi></math> and <math xmlns="http://www.w3.org/1998/Math/MathML" ><mi>B</mi><mo>=</mo><mn>2</mn><mi>z</mi><mi>i</mi><mo>+</mo><mi>y</mi><mi>j</mi><mo>-</mo><msup><mrow><mi>x</mi></mrow><mrow><mn>3</mn></mrow></msup><mi>k</mi></math>,then <math xmlns="http://www.w3.org/1998/Math/MathML" ><mfrac><mrow><msup><mrow><mo>∂</mo></mrow><mrow><mn>2</mn></mrow></msup></mrow><mrow><mo>∂</mo><mi>x</mi><mo>∂</mo><mi>y</mi></mrow></mfrac><mo>(</mo><mi>A</mi><mo>×</mo><mi>B</mi><mo>)</mo></math>at point (1, 0, -2) is _____
Answer: -4i-8j

Question: The solution of the complex number (3+2i)(2-i) is _____
Answer: 8+i

Question: The solution of the complex number (3+2i)(2-i) is _____

Answer: 3-i

Question: 
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Answer: 6

Question:

Answer: -2

Question:

Answer: 7

Question:

Answer: -6

Question:

Answer: -14

Question:

Answer: 4x

Question:

Answer: 2.24

Question:
Answer: -74

Question:
Answer: 6

Question:
Answer: 4-5i

Question:
Answer: 48, 72

Question:
Answer: -1 -2i

Question:
Answer: -6

Question:
Answer: -4

Question:
Answer: 2, 3/2

Answer: 2, 1.5

Question:
Answer: 2i

Question:
Answer: 16

Question:
Answer: 47.83

Question:
Answer: 0

Answer: 0

Question: <p style="text-align:justify">Two vectors are said to be perpendicular if their scalar product is _____
Answer: 0

Question: <p style="text-align:justify">
Answer: 7

Question: <p style="text-align:justify">
Answer: 1

Question: <span style="font-size:10.5pt">The density is an example _______ quantity
Answer: scalar

Question: <img
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Answer: 19

Question: The projection of the vector 2i-3j+6k on the vector i+2j+k is _____
Answer: 8/3

Answer: 2. 67

Question: The projection of the vector 4i-3j+k on the line passing through the points (2,3, -1) and (-2, -4, 3) is _____
Answer: 1

Question: The work done in moving an object along a straight line from (3, 2, -1) to (2, -1, 4) in a force field given by F=4i-3j+2k is _____
Answer: 15

Question: The work done in moving an object along a vector r=3i+2j-5k, if the applied force is F=2i-j-k is _____
Answer: 9

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0BACBxQHMAAEic/wNa7jJ8hTPWSQAAAABJRU5ErkJggg==" alt=""> is _____

Answer: 4

Question: The projection of the vector 4i-3j+k on the line passing through the points (2,3, -1) and (-2, -4, 3) is _____

Answer: 1