mth101 tma4 List of Questions

Latex formatted questions may not properly render

Q1 What are the values of x for which \[\frac {x^3 + 3x^2 + 2x} { x^2 + 5x +6} = 0 \]

- x = 0, 1 or 3
- x = 0, 1 or -3
- x = 0, -1 or 3
- x = 0, -1, or -2

Q2 Let x be the required Arithmetic Mean, then 8, x, 16 form three successive terms in the Aritmetic Progression. Find x.

- 10
- 16
- 12
- 30

Q3 The sum of the first and third terms of a Geometric progression is \[6\frac{1}{2}\] and the sum of the second and fourth terms is \[9\frac{3}{4}\].Find the first term.

- 4
- 3
- 2
- 5

Q4 The coordinate of the centre and the radius of the circle \[y^2 + x^2 ??? 14x -8y + 56 = 0\] is _____

- (7,4)
- (4, 5)
- (3,6)
- (3, 4)

Q5 The sum of five numbers in an Arithmetic Progression is 25 and the sum of their squares is 165. Find the common difference.

- 2
- -2
- -3
- 4

Q6 Let x be the required Geometric Mean (GM) between a and b. Then a, x, b, are the successive terms in the Geometric Progression. Find the GM

- \[\frac{ab} {x}\]
- x{ab}
- \[\sqrt{axb}\]
- \[\sqrt{ab}\]

Q7 Let \[Z_1 = 12 + 5i,~~ Z_2 = 14 ??? 7i\] express \[Z_1 Z_2\] in standard form

- 203 -14i
- 100 -12i
- 123 -15i
- 116-24i

Q8 The limiting value of \[\frac{n^{3}+5n^{2}+2}{2n^{3} + 9} \] as \[n\rightarrow \infty\]is _____

- 1/2
- 3/5
- 1/5
- 2/3

Q9 Suppose A = (1, 4), B = (4, 5), C = (5, 7), then\[(A \times B) \cap (A \times C)\] is _____

- {(1, 5), (4,5)}
- {(2, 5), (3,5)}
- {(2, 3), (1,5)}
- {(3, 5), (2,3)}

Q10 Let U = {1, 2, ?????????., 8, 9}, A = {1, 2, 3, 4}, B = {2, 4, 6, 8}, C = {3, 4, 5, 6}, then \[(A?B)^c\]

- {1, 7, 9}
- {1, 3, 5}
- {1, 2, 3}
- {2,4,5}