MTH101 TMA3 List of Questions

Latex formatted questions may not properly render

Q1 Find the equation of the circle center (2 , -3) and radius 4

- \[y^2 - x^2 -4x + 6y - 3 =0\]
- \[y^2 + x^2 -14x + 6y - 3 =0\]
- \[y^2 + x^2 -4x + 6y - 3 =0\]
- \[y^2 + x^2 -4x + 6y -13 =0\]

Q2 Express 5 + 12i in a polar form, i.e in form of\[Z = r(cos {\theta} + isin {\theta})\]

- Z = 13(Cos45 + isin45)
- Z = 7(Cos45 + isin45)
- Z = 15(Cos45 + isin45)
- Z = 13(Cos45 - isin45)

Q3 As in no 5 above, find \[Z_{1} Z_{2}\].

- 41 + 15i
- 29 + 15i
- 29 - 15i
- 15 + 29i

Q4 Evaluate \[\frac{3n^2- 5n + 4}{4n^2 +7n +1} as n\rightarrow \infty\]

- \[\frac{3n} {7}\]
- \[\frac{-5n} {7}\]
- \[\frac{3} {7n}\]
- \[\frac{3} {7}\]

Q5 Find the number of terms in an Arithmetic Progression whose first term is 5 common difference 3 and sum is 55

- -8
- 5
- 7
- 9

Q6 Find the values of x for which \[\frac {x^ 3 + 3x^ 2 +2x +7} {x^2 +5x +6 }\] is undefined

- x = 3
- x = -3 or x = -2
- x = - 2 or x = 3
- x = 2 or x = 3

Q7 Find the solution set of \[\frac {x+2} {x + 1} = 1\]

- \[x\leqslant 2, x\geqslant -1\]
- \[x \leqslant -2, x \geqslant 1\]
- \[x \leqslant 2, x\geqslant 1\]
- \[x \leqslant -2, x \geqslant -1\]

Q8 Evaluate\[\frac {3n^2 -14n + 6}{n^2 + 7n + 2}\]

- 4
- 5

- 3
- 6

Q9 Find the limiting value of \[\frac { 7n + 5} { 2n - 3}\] as n \rightarrow {\infIty}

- \[\frac{3} {5}\]
- \[\frac{7} {2n}\]
- \[\frac{7n} {2}\]
- \[\frac{7} {2}\]

Q10 How many read Caravan as their only magazine?

- 20
- 2
- 40
- 30