|  |  |  |
| --- | --- | --- |
| S NO | solution | marks |
| 1 |  | 1 |
| 2 | K=-2 | 1 |
| 3 | quadrant | 1 |
| 4 | 45˚, 45˚ | 1 |
| 5 | Only one | 1 |
| 6 | R=1cm | 1 |
| 7 | X=.6666666……..10x=6.66666……10x-x=69x=6X=6/9=2/3 | ½11/2 |
| 8 | Correct location | 2 |
| 9 |  | 2 |
| 10 | AC=BDAB+BC=BC+CDAB+BC-BC=BC-BC+CDAB=CD | ½11/2 |
| 11 | X+y+z+w=360 ˚X+y+x+y=360 ˚2(x+y) =360 ˚X+y=180˚So AOB is a line | ½½½½ |
| 12 | Finding s=18Area of = | ½1 ½ |
| 13 |  x = =  = A=8,b=3 | 111 |
| 14 | x – 1 is a factor of p(x) = 4x3+ 3x2 – 4x + k, p(1) = 0 Now, p(1) = 4(1)3 + 3(1)2 – 4(1) + k So, 4 + 3 – 4 + k =0 i.e., k = –3 | 111 |
| 15 | (99)3= (100-1)3 Using suitable [-property=1003-1-3(100)(1)(100-1) =970299 | 111 |
| 16 | Proper plotting of each point in graph | 1 for each |
| 17 | IN AO=OD(given)∠A= ∠D(alternate int angles)∠AOB= ∠COD(V.O.A)byASA rule) AOB ∆DOC BO=OC(by c.p.c.t) | 21 |
| 18 | Given,To prove ,fig Correct proof | 1 ½1 ½ |
| 19 | L=distance=speedxtime=100/3 mVolume=3x40x100/3=4000ORR=7/2cmVolume=r3Volume=539/3 | 1212 |
| 20 | Volume of cube=volume of spherical bulletsnxr3443=nxxx2x2x2For correct computation and n=2541 | 12 |
| 21 | (i) (ii) 0(iii)1 | 111 |
| 22 | For correct formula

|  |  |  |
| --- | --- | --- |
| Salary in (Rupees ) | Number of workers  | fixi |
| 3000 | 16 | 48000 |
| 4000 | 12 | 48000 |
| 5000 | 10 | 50000 |
| 6000 | 8 | 48000 |
| 7000 | 6 | 42000 |
| 8000 | 4 | 32000 |
| 9000 | 3 | 27000 |
| 10000 | 1 | 10000 |
| Total | 60 | 305000 |

For correct ∑fi xi =305000For correct mean=Rs 5083.33 ORMean= 822/15 = 54.8Median= 52Mode = 52 | 21111 |
| 23 | Using factor theorem finding factor of given p(x) as (x +1)Dividing p(x) by (x+1) we get x2 – 4x – 5P(x)=(x+1) (x+1) (x-5) ORUsing factor theorem finding factor of given p(x) as (x -1)Dividing p(x) by (x-1) we get x2 – 22x +120P(x)=(x-1) (x-10) (x-12) | 121121 |
| 24 | 1. Using correct identity,

 9x2- 3x -201. Using correct identity,

x2 + 4y2 +16z2+4xy+16yz+8zx | ½1 ½½1 ½ |
| 25 | Given, To prove ,constt. ,fig.Correct Proof  ORGiven, To prove ,constt. ,fig.Correct Proof  | 2222 |
| 26 | For correct constructionSteps of construction | 31 |
| 27 | For figureFinding area of triangle using heron’s formula=84 sq.cmArea of triangle=1/2 x 15 x h h= 11.2cmArea of trapezium= 196sq.cm | 211 |
| 28 | For correct figure, given, to prove and constructionFor correct proof OR∠CED= 50(linear pair)∠EDC=110 (angle sum property0 ∠BAC=∠BDC=110(Angles in the same segment) | 2211 ½1 ½ |
| 29 | R=7/2 cmVol. of cylindrical bowl=πx3.5x3.5x4=154 cm3Amount of soup for 250 patients=250 x 154 cm3 =38500 cm3 | ½2 ½1 |
| 30 | For correct histogramFor correct frequency polygon | 22 |