|  |  |  |
| --- | --- | --- |
| 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=6  9x=6  X=6/9=2/3 | ½  1  1/2 |
| 8 | Correct location | 2 |
| 9 |  | 2 |
| 10 | AC=BD  AB+BC=BC+CD  AB+BC-BC=BC-BC+CD  AB=CD | ½  1  1/2 |
| 11 | X+y+z+w=360 ˚  X+y+x+y=360 ˚  2(x+y) =360 ˚  X+y=180˚  So AOB is a line | ½  ½  ½  ½ |
| 12 | Finding s=18  Area of = | ½  1 ½ |
| 13 | x  =  =  =  A=8,b=3 | 1  1  1 |
| 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 | 1  1  1 |
| 15 | (99)3  = (100-1)3  Using suitable [-property  =1003-1-3(100)(1)(100-1)    =970299 | 1  1  1 |
| 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) | 2  1 |
| 18 | Given,To prove ,fig  Correct proof | 1 ½  1 ½ |
| 19 | L=distance=speedxtime=100/3 m  Volume=3x40x100/3=4000  OR  R=7/2cm  Volume=r3  Volume=539/3 | 1  2  1  2 |
| 20 | Volume of cube=volume of spherical bullets  nxr3  443=nxxx2x2x2  For correct computation and n=2541 | 1  2 |
| 21 | (i)  (ii) 0  (iii)1 | 1  1  1 |
| 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 =305000  For correct mean=Rs 5083.33  OR  Mean= 822/15 = 54.8  Median= 52  Mode = 52 | 2  1  1  1  1 |
| 23 | Using factor theorem finding factor of given p(x) as (x +1)  Dividing p(x) by (x+1) we get x2 – 4x – 5  P(x)=(x+1) (x+1) (x-5)  OR  Using factor theorem finding factor of given p(x) as (x -1)  Dividing p(x) by (x-1) we get x2 – 22x +120  P(x)=(x-1) (x-10) (x-12) | 1  2  1  1  2  1 |
| 24 | 1. Using correct identity,   9x2- 3x -20   1. Using correct identity,   x2 + 4y2 +16z2+4xy+16yz+8zx | ½  1 ½  ½  1 ½ |
| 25 | Given, To prove ,constt. ,fig.  Correct Proof  OR  Given, To prove ,constt. ,fig.  Correct Proof | 2  2  2  2 |
| 26 | For correct construction  Steps of construction | 3  1 |
| 27 | For figure  Finding area of triangle using heron’s formula  =84 sq.cm  Area of triangle=1/2 x 15 x h  h= 11.2cm  Area of trapezium= 196sq.cm | 2  1  1 |
| 28 | For correct figure, given, to prove and construction  For correct proof  OR    ∠CED= 50(linear pair)  ∠EDC=110 (angle sum property0  ∠BAC=∠BDC=110(Angles in the same segment) | 2  2  1  1 ½  1 ½ |
| 29 | R=7/2 cm  Vol. of cylindrical bowl=πx3.5x3.5x4=154 cm3  Amount of soup for 250 patients=250 x 154 cm3 =38500 cm3 | ½  2 ½  1 |
| 30 | For correct histogram  For correct frequency polygon | 2  2 |