**MARKING SCHEME**

**SAMPLE PAPER 1**

**CLASS- VIII**

**MATHS**

**SECTION A**

1 .$\frac{2}{7}$ 1 mark

2. 14$a^{13}$ 1mark

3. 25 1 mark

4. 3ab 1 mark

**SECTION B**

5. 100 – 1 = 99 – 3 = 96 – 5 = 91 – 7 = 84 – 9 = 75 – 11 = 64 – 13 = 51

 51 – 15 = 36 – 17 = 19 – 19 = 0 1 mark

 Counting of Steps = 10 1/2 mark

 Square root of 100 = 10 1/2 mark

6. $\left(4a-3b\right)^{2}=\left(4a\right)^{2}+\left(-3b\right)^{2}-2 X4aX3b$ 1 mark

 =$16a^{2}+9b^{2}-24ab$ 1 mark

7. d1 =20cm

d2  = 4.1 cm

area of rhombus= $\frac{1}{2}$ d1 d2 1 mark

= $\frac{1}{2} X20X4.1$

 = 41 sq cm. 1 mark

8. surface area =1200 sq cm

 6$a^{2}=1200$ 1 mark

 $a^{2}$ = $\frac{1200}{6}$

 $a $= 10$\sqrt{2}$ cm 1 mark

9. A = 5 1 mark

 B = 4

 C = 1 1 mark

10. 1 + 5 + 2 + 8 + 7 = 23

 23 is not divisible by 3 1.5 marks

 So, 15287 is not divisible by 3 0.5 marks

**SECTION C**

11. For each correct rational number ½ mark

12. 2m= 8

 m= 4 1 mark

$m^{2}-1=16-1=15$ 1 mark

$m^{2}+1=16+1=17$ 1 mark

13. After finding the $\sqrt{5607 }$ by long division method,

we get remainder 131 2 marks

 5607 – 131 = 5476

$\sqrt{5476}$ = 74 1 mark

Or

Greatest number of 4-digits = 9999. 1 mark

 To find 9999 by long division method.

 The remainder is 198. 1 mark

Therefore, the required perfect square is 9999 – 198 = 9801.

And, √9801 = 99 1 mark

14 a) 1.001 X $10^{11}$

 = 1.001 X 100000000000

 = $\frac{1001}{1000}$ X 100000000000

 = 1001 X 100000000 = 100100000000 1 ½ marks

 b) 0.000000352

 = $\frac{352}{10^{8}}$

 = 3.52 X$10^{-6}$ 1 ½ marks

15. (x2 – 2xy + y2) – z2

(x – y)2 – z2 1.5 marks

 (x – y + z) (x – y – z) 1.5 marks

Or

 *m*4 *–* 256 = (*m*2)2 *–* (16) 2 1 mark

 = (*m*2 *–*16) (*m*2 +16) 1 mark

 = (*m* – 4) (*m* + 4) (*m*2 +16) 1 mark

16. For correct plotting 2 marks

For verification 1 mark

17. For correct scale and labelling 1 mark

 For correct graph. 2 marks

18.i) Faces = ? When vertices = 6 and Edges = 12

 F + V – E = 2 1 mark

 F + 6 – 12 = 2 1 mark

 E = 8 1 mark

**SECTION D**

19. $\frac{2}{5 }X\frac{-3}{7} - \frac{1}{6}X\frac{3}{2 } + \frac{1}{14}X\frac{2}{5}$

 = $\frac{2}{5 }X\frac{-3}{7}+ \frac{1}{14}X\frac{2}{5}- \frac{1}{6}X\frac{3}{2 }$

 = $\frac{2}{5 }X (\frac{-3}{7}+ \frac{1}{14}) - \frac{1}{6}X\frac{3}{2 }$ 2 marks

 = $\frac{2}{ 5 } X (\frac{-6+1}{14}) - \frac{1}{6} X \frac{3}{2 }$

 = $\frac{2}{5 } X \frac{-5}{14}) - \frac{1}{6} X \frac{3}{2 }$

 = $\frac{-1}{7} - \frac{1}{4}$

 = $\frac{-11}{28}$ 2 marks

 20. $\frac{6x - 5}{3} +1= \frac{2x-3}{5}$

 $\frac{6x-5+3}{3} = \frac{2x-3}{5}$

 $\frac{6x-2}{3} = \frac{2x-3}{5}$

 5 ($6x-2)=3 (2x-3)$ 2 marks

 $30x-10=6x-9$

 $30x-6x=-9+10$

 $24x= 1$

$x=1/24$ 2 marks

21. Let Amina thinks x number

 According to condition

$8( x- \frac{5}{2})=3x$ 2 marks

$$8x-20=3x$$

$$8x-3x=20$$

$$5x=20$$

*x*=4 2 marks

OR



 2 MARKS

 6 (4*x* + 8) = 5 (5*x* + 8)

 24*x* + 48 = 25*x* + 40

 24*x* + 48 – 40 = 25*x*

 24*x* + 8 = 25*x*

 8 = 25*x* – 24*x*

 8 = *x* 1 mark

Therefore, Anu’s present age = 4*x* = 4 × 8 = 32 years ½ mark

Raj’s present age = 5*x* = 5 × 8 = 40 years ½ mark

22$. $ For correct answer 4 marks

23. Radius= 7m

Height= 3m

Total surface area of Cylinder= 2$πr(h+r)$

= 440 sq m 2marks

Volume of cylindrical tank= $π^{2}$ r h

 = 462 cu m. 2marks

OR

 Surface area of suitcase=2x(80 x 48+ 48 x24 + 24x 80)

 = 13824 sq cm 2 marks

 Surface area of 100 suitcase = 100 X 13824

 Length of tarpaulin = $\frac{1382400}{96}$= 14400cm= 144m 2 marks

24. $\frac{3^{-4} X 10^{-7} X 125}{5^{-6} X 6^{-4}}$

 $\frac{3^{-4} X 10^{-7} X 5^{3}}{5^{-6} X6^{-4}}$

 = $\frac{25}{8}$ 4 marks

25. i) $\frac{2kg}{9 X 10^{6}} =\frac{5kg}{x}$

x = 2.25 X107  crystals 2 marks

 $\frac{2kg}{9 X 10^{6}} =\frac{1.2kg}{x}$

 x = 5.4 X106  crystals 2 marks

OR

Putting information in table

|  |  |  |
| --- | --- | --- |
| Number of Hours | 6 | 5 |
|  Number of bottles | 840 | X |

(1 mark)
 It is a case of direct variation

$\frac{6}{840}=\frac{5}{x}$ (1$mark)$

$x=\frac{840×5}{6}$ (1 mark)

 $x=700$ bottles ($1mark )$

26

|  |  |  |
| --- | --- | --- |
| Number of student | 100 | 125 |
| Number of days | 20 | Y |

 1mark

More students lesser no.of days the food will last.It is an Inverse variation 1mark

100 x20=125 x Y 1mark

Y=16 days. 1 mark

27. For correct factorization 2 marks

 For correct division 2 marks

28. For correct answer of each part 1 mark