



OSDAV Public School, Kaithal
July Test (2024)
Class :VIII
Subject :Mathematics

SET-A

Time: 1 hr 20 min.

M.M. : 30

General Instructions:- All questions are compulsory.

Q.No.	Questions	Marks												
Section A														
1	Coordinates of origin are: (a) (0,0) (b) (x,0) (c) (0,y) (d) (x,y)	1												
2	The value of $(0.00032)^{-2/5}$ (a) 5 (b) 32 (c) 25 (d) 0.04	1												
3	The distance between (2,4) and (2,7) is (a) 6 units (b) 8 units (c) 4 units (d) 3 units	1												
4	If $\sqrt{12100} = y + \sqrt{100}$ then y is : (a) 100 (b) 110 (c) 10 (d) 11	1												
	Direction : A statement of assertion (A) is followed by a statement of reason (R) in (Q no.5) Choose the correct option out of the following : a) Both assertion(A) and reason (R) are true and reason (R) is the correct explanation of assertion (A) b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A) c) Assertion (A) is true but reason (R) is false. d) Assertion (A) is false but reason (R) is true.													
5	Assertion(A) :The distance of the point A(4,3) from the y-axis is 4 units. Reason (R) : Any point lying on the y-axis is of the form (0,y).	1												
Section -B														
6	Solve for x: $8^{2x-1} = 64$	2												
7	Find the cube root of 110592 using Estimation method.	2												
8	What is the smallest number by which 2560 must be multiplied so that the quotient is a perfect cube?	2												
9	Write a pythagorean triplet if one number is 14.	2												
10	Evaluate : $(1^3 + 2^3 + 3^3 + 4^3)^{3/2}$	2												
Section C														
11	Find the square root of 5.462 correct to two places of decimal.	3												
12	$\frac{(81)^{3/4} \times (216)^{-2/3} \times (125)^{1/3}}{(64)^{1/6} \times (243)^{-2/5} \times (343)^{1/3}}$ Simplify :	3												
13	Three numbers are in the ratio 2:3:4 . The sum of their cubes is 33957. Find the numbers.	3												
14	Find the least number which must be subtracted from 16394 to obtain a perfect square.	3												
15	The following table gives information on of the runs scored by Rohan in 5 matches . Plot a graph for the given data.	3												
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 5px;">Matches</td> <td style="padding: 5px;">1</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">3</td> <td style="padding: 5px;">4</td> <td style="padding: 5px;">5</td> </tr> <tr> <td style="padding: 5px;">Runs scored</td> <td style="padding: 5px;">60</td> <td style="padding: 5px;">45</td> <td style="padding: 5px;">70</td> <td style="padding: 5px;">85</td> <td style="padding: 5px;">30</td> </tr> </table>	Matches	1	2	3	4	5	Runs scored	60	45	70	85	30	
Matches	1	2	3	4	5									
Runs scored	60	45	70	85	30									



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SET-B

Time: 1 hr 20 min.

M.M. : 30

General Instructions:- All questions are compulsory.

Q.No.	Questions	Marks												
Section A														
1	The distance between (1,5) and (7,5) is (a) 6 units (b) 8 units (c) 4 units (d) 3 units	1												
2	The value of $(0.000064)^{-1/6}$ (a) 5 (b) 32 (c) 25 (d) 0.04	1												
3	The point where x-axis and y-axis meet is: (a) (0,0) (b) (x,0) (c) (0,y) (d) (x,y)	1												
4	If $\sqrt{12100} - \sqrt{2500} = y$ then y is : (a) 600 (b) 160 (c) 50 (d) 60	1												
	Direction : A statement of assertion (A) is followed by a statement of reason (R) in (Q no. 5) Choose the correct option out of the following : a) Both assertion(A) and reason (R) are true and reason (R) is the correct explanation of assertion (A) b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A) c) Assertion (A) is true but reason (R) is false. d) Assertion (A) is false but reason (R) is true.													
5	Assertion(A) :The distance of the point A(4,3) from the y-axis is 3 units. Reason (R) : Any point lying on the y-axis is of the form (0,y).	1												
Section –B														
6	Write a pythagorean triplet if one number is 12.	2												
7	What is the smallest number by which 10584 must be multiplied so that the quotient is a perfect cube?	2												
8	Solve for x: $6^{2x+2} = 216$	2												
9	Find the cube root of 148877 using Estimation method.	2												
10	Simplify : $(6^{-1} - 8^{-1}) + (2^{-1} - 3^{-1})$	2												
Section C														
11	Find the square root of 19.5 correct to two places of decimal.	3												
12	Three numbers are in the ratio 1:2:3 . The sum of their cubes is 12348. Find the numbers.													
13	Find the least number which must be subtracted from 28584 to obtain a perfect square.													
14	$\frac{(256)^{-1/4} \times (36)^{-1/2} \times (81)^{1/4}}{(216)^{-1/3} \times (512)^{-1/3} \times (16)^{1/4}}$ Simplify :	3												
15	The following table gives information about the temperature of first five days of the month of June. Plot a graph for the given data.	3												
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 5px;">Days</td> <td style="padding: 5px;">1</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">3</td> <td style="padding: 5px;">4</td> <td style="padding: 5px;">5</td> </tr> <tr> <td style="padding: 5px;">Temperature (⁰c)</td> <td style="padding: 5px;">42</td> <td style="padding: 5px;">45</td> <td style="padding: 5px;">38</td> <td style="padding: 5px;">35</td> <td style="padding: 5px;">40</td> </tr> </table>	Days	1	2	3	4	5	Temperature (⁰ c)	42	45	38	35	40	
Days	1	2	3	4	5									
Temperature (⁰ c)	42	45	38	35	40									



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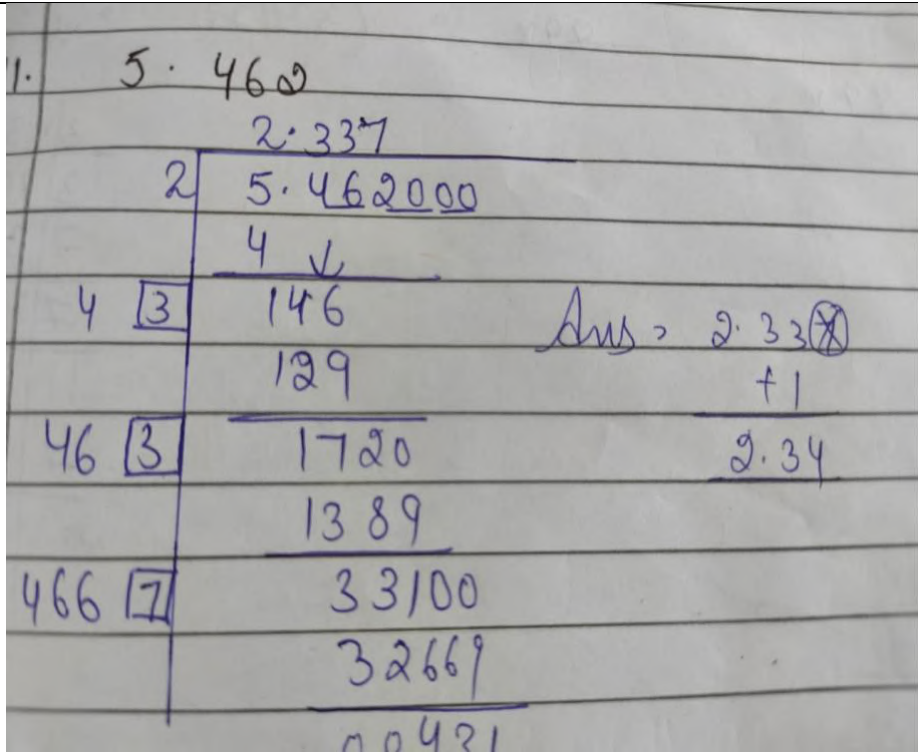
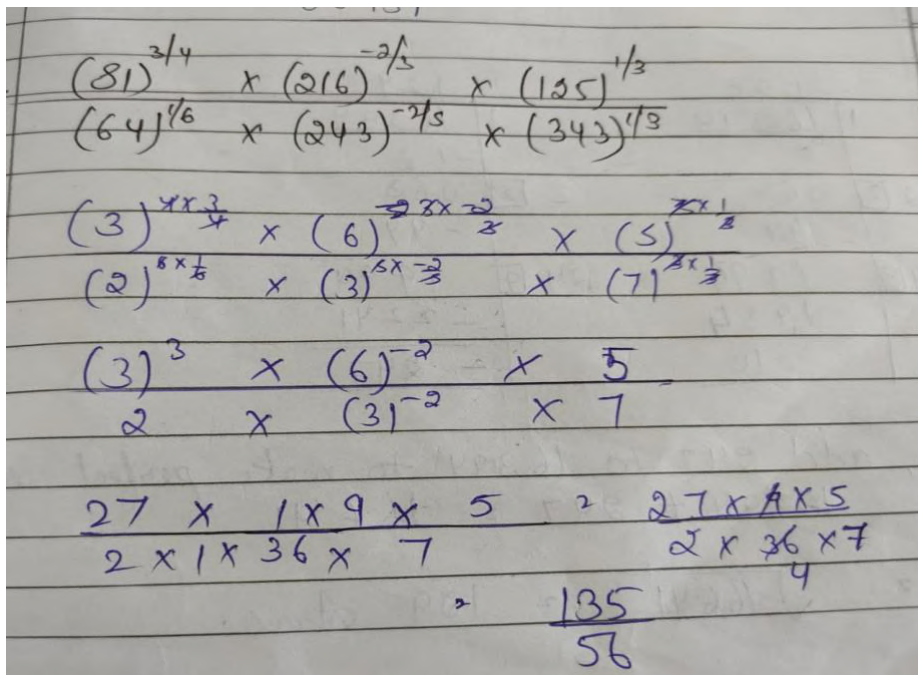
Subject :Mathematics

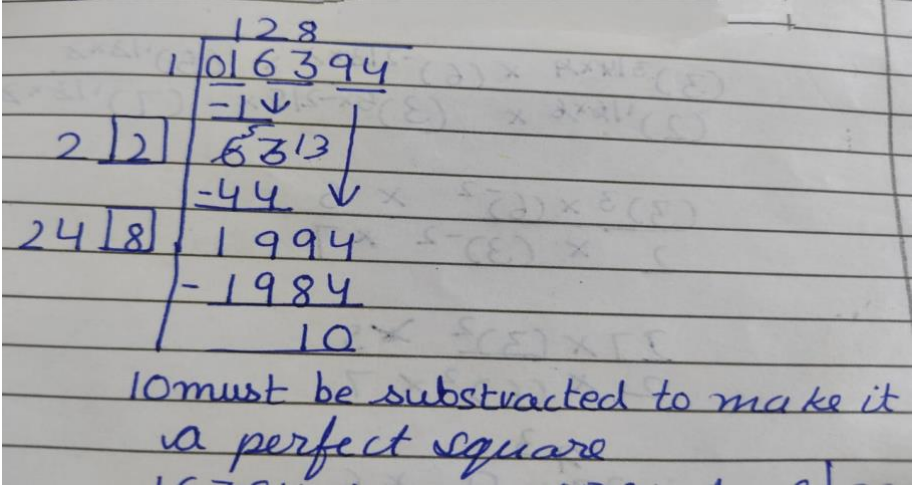
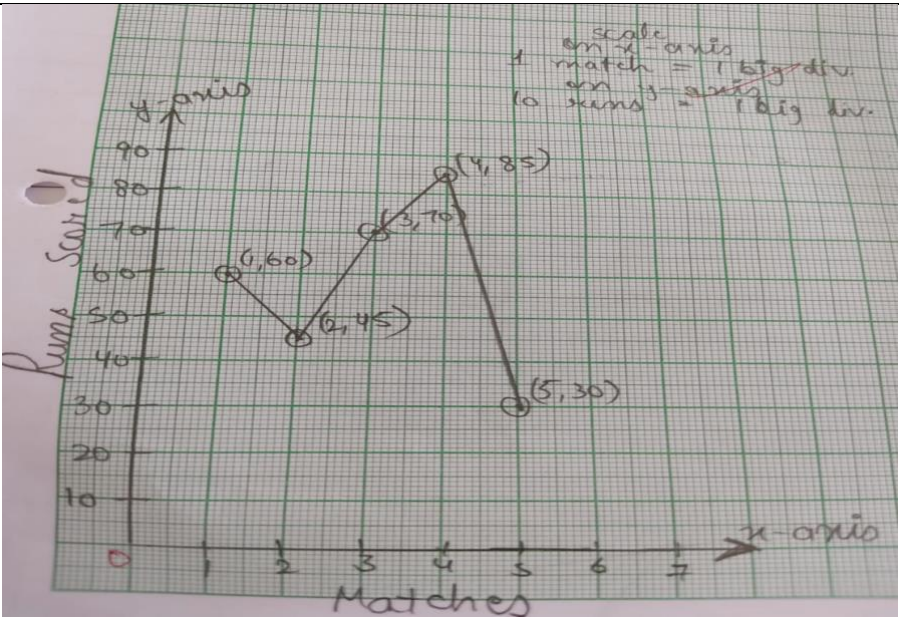
Marking Scheme

SET-A

M.M:30

Q.No.	Questions	Marks allotted	Marks																						
Section A																									
1	(a) (0,0)	1	1																						
2	(c) 25	1	1																						
3	(d) 3 units	1	1																						
4	(a) 100	1	1																						
5	b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A)	1	1																						
Section -B																									
6	$8^{2x-1} = 64$ $8^{2x-1} = 8^2$ On comparing $2x-1=2$ $2x=3$ $X=3/2$	$\frac{1}{2}$ $\frac{1}{2}$ 1	2																						
7	110592 Group I 592 $2^3=8$ Ones digit of group I = 8 $\sqrt[3]{110592} = 48$	group II 110 $4^3 < 110 < 5^3$ ten sdigit=4	$\frac{1}{2}$ for group $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	2																					
8	<p> $2560 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$ $\times 5$ $5 \times 5 = 25$ must be multiplied to make 2560 a perfect cube </p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td>2</td><td>2560</td></tr> <tr><td>2</td><td>1280</td></tr> <tr><td>2</td><td>640</td></tr> <tr><td>2</td><td>320</td></tr> <tr><td>2</td><td>160</td></tr> <tr><td>2</td><td>80</td></tr> <tr><td>2</td><td>40</td></tr> <tr><td>2</td><td>20</td></tr> <tr><td>2</td><td>10</td></tr> <tr><td>5</td><td>5</td></tr> <tr><td></td><td>1</td></tr> </table>	2	2560	2	1280	2	640	2	320	2	160	2	80	2	40	2	20	2	10	5	5		1	1 for p.f $\frac{1}{2}$ $\frac{1}{2}$	2
2	2560																								
2	1280																								
2	640																								
2	320																								
2	160																								
2	80																								
2	40																								
2	20																								
2	10																								
5	5																								
	1																								
9	$2m, m^2-1, m^2+1$ $2m=14, 7^2-1, 7^2+1$ $M=7, 48, 50$ (14,48,50)	$\frac{1}{2}$ for each step	2																						
10	$(1^3 + 2^3 + 3^3 + 4^3)^{3/2}$	$\frac{1}{2}$	2																						

	$(1+8+27+64)^{3/2}$ $100^{3/2}$ $10^{2 \times 3/2}$ 1000	For each step	
Section C			
11		2.5+0.5	3
12	$\frac{(81)^{3/4} \times (216)^{-2/3} \times (125)^{1/3}}{(64)^{1/6} \times (243)^{-2/5} \times (343)^{1/3}}$ 	1+1+1	3

13	<p>34 let the no. be n</p> $(2n)^3 + (3n)^3 + (4n)^3 = 33957$ $8n^3 + 27n^3 + 64n^3 = 33957$ $99n^3 = 33957$ $n^3 = \frac{33957}{99} = 343$ $n = \sqrt[3]{343}$ $n = 7$ <p>1st no. = $2n = 2 \times 7 = 14$ Ans 2nd no. = $3n = 3 \times 7 = 21$ Ans 3rd no. = $4n = 4 \times 7 = 28$ Ans</p>	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>1.5</p> <p>$\frac{1}{2}$</p>	3
14	 <p>10 must be subtracted to make it a perfect square</p>	2+1	3
15	 <p>scale on x-axis 1 match = 1 big div on y-axis 10 runs = 1 big div.</p>	<p>2 for plotting</p> <p>$\frac{1}{2}$ for joining</p> <p>$\frac{1}{2}$ for scale</p>	3



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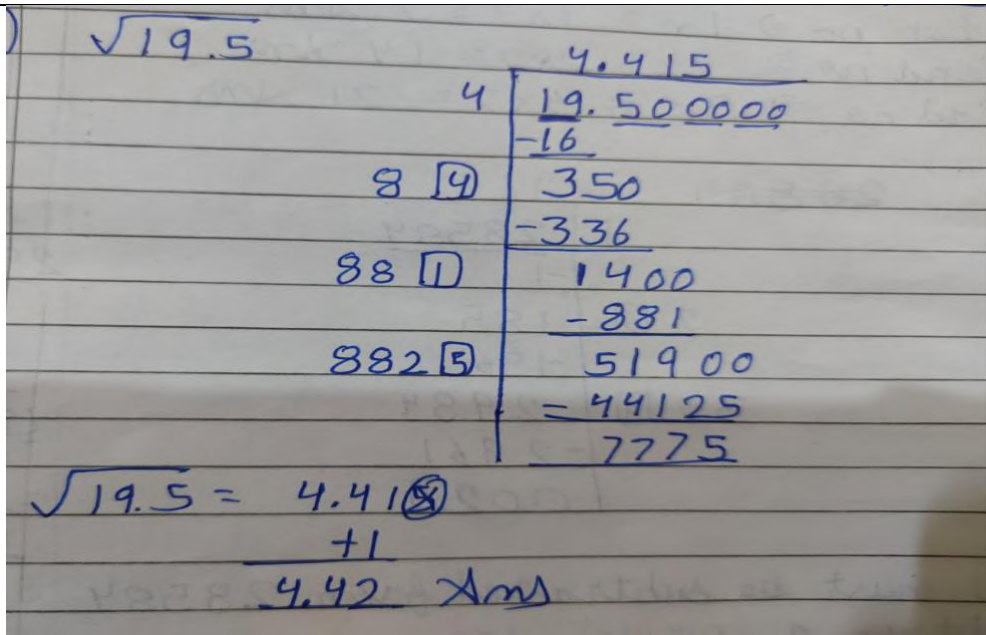
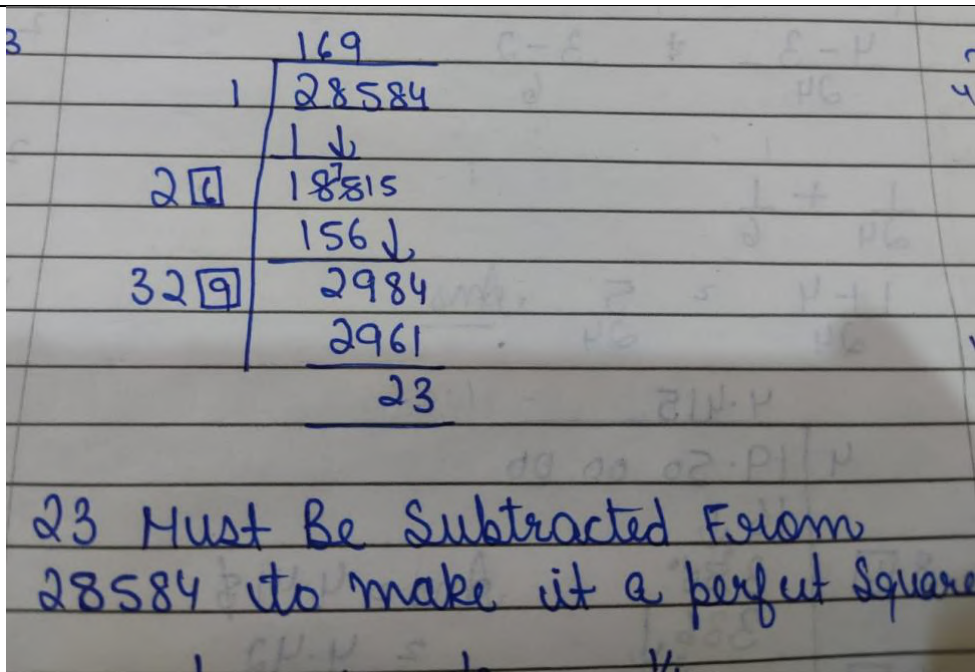
Subject :Mathematics

Marking Scheme

SET-B

M.M:30

Q.No.	Questions	Marks allotted	Marks
Section A			
1	(a) 6 units	1	1
2	(a) 5	1	1
3	(a) (0,0)	1	1
4	(d) 60	1	1
5	d) Assertion (A) is false but reason (R) is true.	1	1
Section -B			
6	2m, m ² -1,m ² +1 2m=12 , 6 ² -1 , 6 ² +1 M=6 35 37 (12,35,37)	½ for each step	2
7		1 for p.f ½ ½	2
8	6 ^{2x+2} = 216 6 ^{2x+2} = 6 ³ 2x+2= 3 X=1/2	½ for each step	2
9	148877 Group I 877 7 ³ =343 Ones digit of group I = 3 $\sqrt[3]{148877} = 53$ group II 148 5 ³ < 148 < 6 ³ tens digit=5	½ for group ½ ½ ½	2
10	(6 ⁻¹ - 8 ⁻¹) + (2 ⁻¹ - 3 ⁻¹) $(\frac{1}{6} - \frac{1}{8}) + (\frac{1}{2} - \frac{1}{3})$ $(\frac{8-6}{48}) + (\frac{3-2}{6})$	½ ½	2

	$\frac{2}{48} + \frac{1}{6}$ $\frac{2+8}{48}$ $\frac{10}{48} = \frac{5}{24}$	$\frac{1}{2}$ $\frac{1}{2}$	
Section C			
11		2.5+0.5	3
12	<p>Let the numbers are $1x, 2x, 3x$</p> <p>According to questions</p> $(1x)^3 + (2x)^3 + (3x)^3 = 12348$ $1x^3 + 8x^3 + 27x^3 = 12348$ $36x^3 = 12348$ $x^3 = 12348/36 = 343$ $x = 7$ <p>Numbers are 7, 14, 21</p>	$\frac{1}{2}$ $\frac{1}{2}$ 1.5 $\frac{1}{2}$	3
13	 <p>23 Must Be Subtracted From 28584 to make it a perfect square</p>	2+1	3

14

$$\frac{(256)^{-\frac{1}{4}} \times (36)^{-\frac{1}{2}} \times (81)^{\frac{1}{4}}}{(216)^{-\frac{1}{3}} \times (512)^{-\frac{1}{3}} \times (16)^{\frac{1}{4}}}$$

Handwritten solution for question 14:

$$\frac{(256)^{-\frac{1}{4}} \times (36)^{-\frac{1}{2}} \times (81)^{\frac{1}{4}}}{(216)^{-\frac{1}{3}} \times (512)^{-\frac{1}{3}} \times (16)^{\frac{1}{4}}}$$

$$\frac{(4)^{4 \times -\frac{1}{4}} \times (6)^{2 \times -\frac{1}{2}} \times (3)^{4 \times \frac{1}{4}}}{(6)^{3 \times -\frac{1}{3}} \times (8)^{3 \times -\frac{1}{3}} \times (2)^{4 \times \frac{1}{4}}}$$

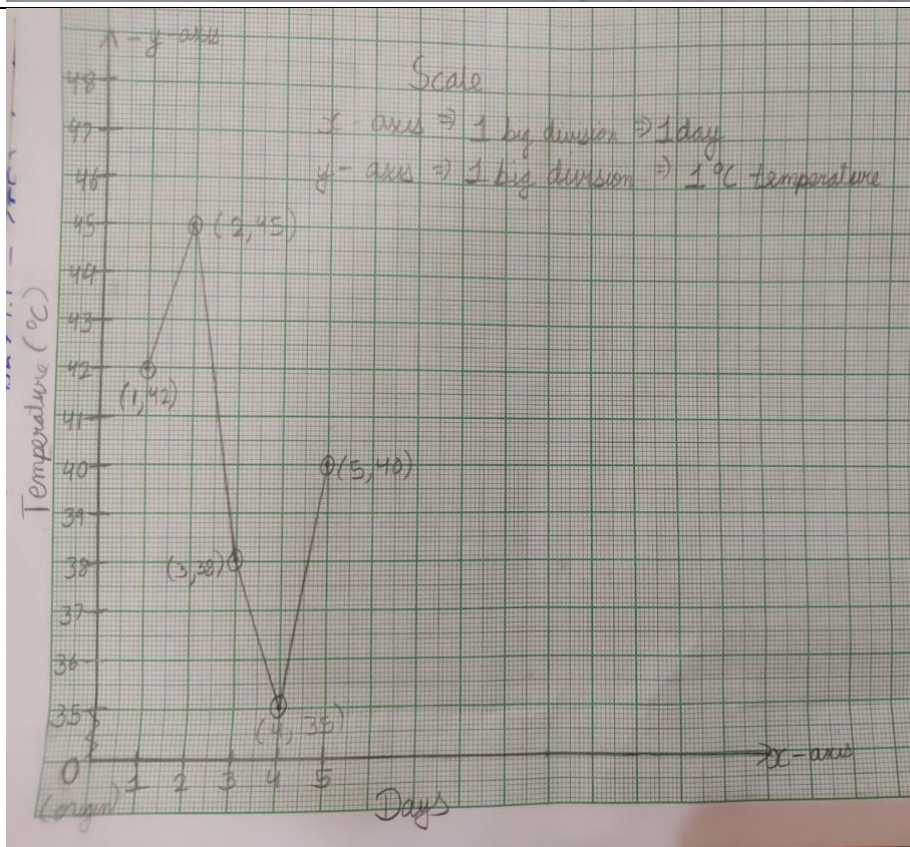
$$\frac{(4)^{-1} \times (6)^{-1} \times 3}{(6)^{-1} \times (8)^{-1} \times 2}$$

$$\frac{3 \times 3 \times 3}{4 \times 6 \times 2} = \frac{27}{48} = \frac{3}{8} \text{ Ans}$$

3

1+1+1

15



3

2 for plotting

 $\frac{1}{2}$ for joining $\frac{1}{2}$ for scale