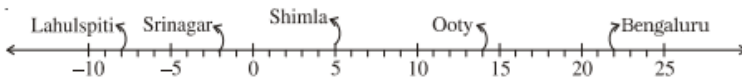# MATHS

BOOKS - PSEB

Integers

Example

1. Following number lines shows the temperature in degree celsius ($\,^{\circ}C$) at different places on a particular day.
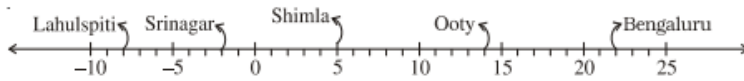

Observe this number line and write the temperature of the places marked on it.

▶ **Watch Video Solution**

2. Following number lines shows the temperature in degree celsius (ˆ ∘ C) at different places on a particular day.

What is the temperature difference between the hottest and the coldest places among the above?

> ▶ **Watch Video Solution**

3. Following number lines shows the temperature in degree celsius (ˆ ∘ C) at different places on a particular day.

What is the temperature difference between Lahulspiti and Srinagar?

> ▶ **Watch Video Solution**

4. Following number lines shows the temperature in degree celsius ($^\circ C$) at different places on a particular day.
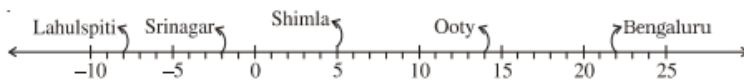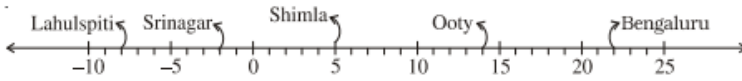

Can we say temperature of Srinagar and Shimla taken together is less than the temperature at Shimla? Is it also less than the temperture at Srinagar?

> ▶ **Watch Video Solution**

5. In a quiz, positive marks are give for correct answewrs and negative marks are given for incorrect answers. If Jack's scores in five successive rounds were 25,-5,-10,15 and 10, What was his total at the end?

> ▶ **Watch Video Solution**

6. At Srinagar temperature was $-5°C$ on Monday and then it dropped by $2°C$ on Tuesday. What was the temperature of Srinagar on Tuesday? On Wednesday, it rose by $4°C$. What was the temperature on this day?

▶ **Watch Video Solution**

7. A plance is flying at the height of 5000 m above the sea level. At a particular point, it is exactly above a submarine floating 1200 below the sea level. What is the vertical distance between them?

▶ **Watch Video Solution**

8. Mohan deposits Rs. 2,000 in his bank account and withdraw Rs. 1,642 from it, the next day. If withdrawal of amount from the account is represented by a negative integer, then how will you represent

the amount deposited? Find the balance in Mohan's account after the withdrawal.

9. Rita goes 20 km towards east from a point A to the point B. From B, she moves 30 km towards west along the same road. If the distance towards east is represented by a positibe integer then, how will you represent the distance travelled towards west? By which integer will you represent her final position from A?

10. In a magic square each row, column and diagonal have the same sum. Check which of the following is a magic square.

5	−1	− 4
−5	−2	7
0	3	−3

(i)

11. In a magic square each row, column and diagonal have the same sun. Check which of the following is a magic square.

1	−10	0
−4	−3	−2
−6	4	−7

(ii)

12. Verify a-(-b) = a+b for the following values of a and b.

a = 21, b = 18

13. Verify a-(-b) = a+b for the following values of a and b.

a = 118, b = 125

14. Verify a-(-b) = a+b for the following values of a and b.

a = 75, b = 84

15. Verify a-(-b) = a+b for the following values of a and b.

a = 28, b = 11

16. Use the sign of >,< or = in the box to make the statements true.

(-8)+(-4) ☐ (-8)-(-4)

17. Use the sign of >,< or = in the box to make the statements true.

(-3)+7-(19) ☐ 15-8+(-9)

18. Use the sign of >,< or = in the box to make the statements true.

23-41+11 ☐ 23-41-11

19. Use the sign of >,< or = in the box to make the statements true.

39+(-24)-(15) ☐ 36+(-52)-(-36)

20. Use the sign of >,< or = in the box to make the statements true.

-231+79+51 ☐ -399+159+81

21. A water tank has steps inside it. A monkey is sitting on the topmost step(i.e., the first step). The water level is at the ninth step.
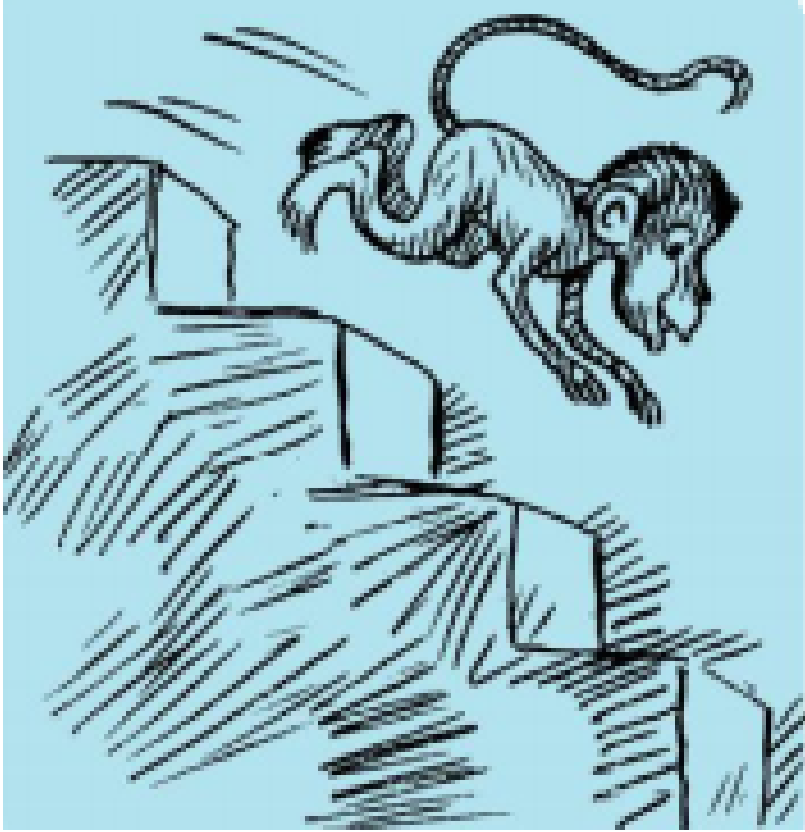
He jumps 3 steps down and then jumps back 2 steps up. In how many jumps will he reach the water level?

> ▶ **Watch Video Solution**

22. A water tank has steps inside it. A monkey is sitting on the topmost step(i.e., the first step). The water level is at the ninth step.

After drinking water, he wants to go back. For this, he jumps 4 steps up and then jumps back 2 steps down in every move. In how many jumps will he reach back the top step?
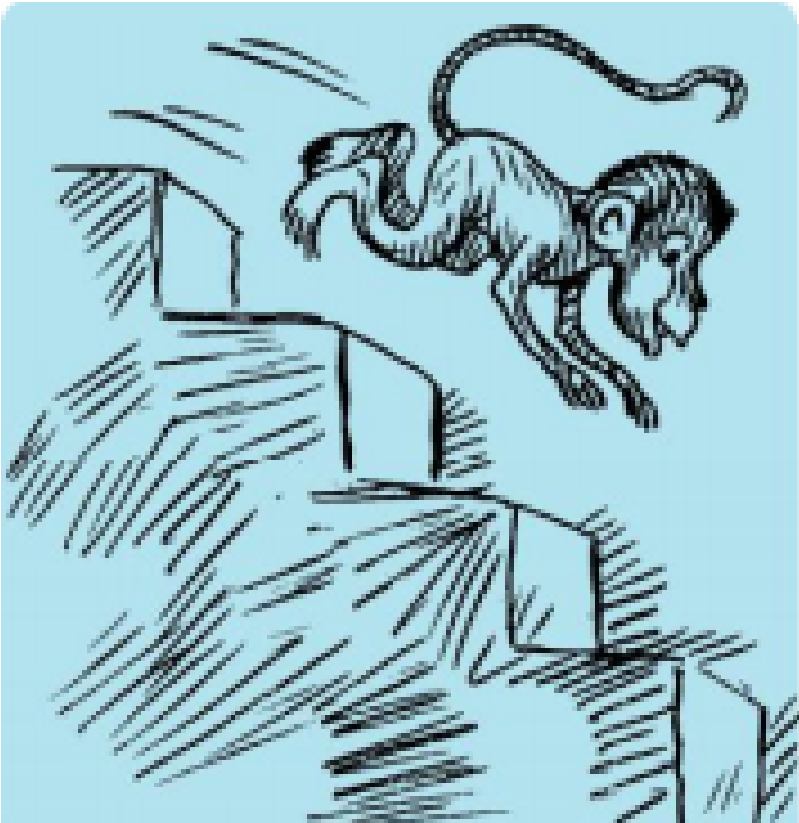
▶ **Watch Video Solution**

23. A water tank has steps inside it. A monkey is sitting on the topmost step(i.e., the first step). The water level is at the ninth step.

If the number of steps moved down is represented by negative integers and the number of steps moved up by positive integers, represent his moves in part (i) and (ii) by completing the following,

(a) -3+2 -..= -8 (b) 4-2+...= 8. In (a) the sum (-8) represents going down by eight steps. So, what will the sum 8 in (b) represent?

24. Write down a pari of integers whose

sum is -3

25. Write down a pari of integers whose

difference is -5

26. Write down a pari of integers whose

difference is 2

27. Write down a pari of integers whose

sum is 0

> ▶ **Watch Video Solution**

28. Write down a pari of integers whose:

sum is -7

> ▶ **Watch Video Solution**

29. Write down a pari of integers whose:

difference is -10

> ▶ **Watch Video Solution**

30. Write down a pari of integers whose

sum is 0

▶ **Watch Video Solution**

31. Write a pair of negative integers whose difference gives 8.

▶ **Watch Video Solution**

32. Write a negative integer and a positibe integer whose sum is -5.

▶ **Watch Video Solution**

33. Write a negative interger and a positive integer whose difference

is -3.

▶ **Watch Video Solution**

34. In a quiz, team A scored -40, 10,0 and tema B scored 10,0,-40 in three successive rounds. Which team socred more? Can we say that we can add integers in any order?

35. Fill in blanks to make the following statements true:

(-5)+(-8) = (8) + (........)

36. Fill in blanks to make the following statements true:

-53 +........ = -53

37. Fill in blanks to make the following statements true:

17+ ....=0

38. Fill in blanks to make the following statements true:

[13+(-12)]+(.........) = 13+[(-12)+(-7)]

39. Fill in blanks to make the following statements true:

(-4)+[15+(-3)] = [-4+15] + ...

40. The product $(-9) \times (-5) \times (-6) \times (-3)$ is positive whereas the product $(-9) \times (-5) \times 6 \times (-3)$ is negative. Why?

> ▶ Watch Video Solution

41. What will be the sign of the product if we multiply together.

8 negative intergers and 3 positive intergers?

> ▶ Watch Video Solution

42. What will be the sign of the product if we multiply together.

5 negative intergers and 4 positive intergers?

> ▶ Watch Video Solution

43. What will be the sign of the product if we multiply together.

(-1), twelve times?

> ▶ **Watch Video Solution**

44. What will be the sign of the product if we multiply together.

(-1),2m times, m is a natural number?

> ▶ **Watch Video Solution**

45. Find each of the following products:

$(- 18) \times (- 10) \times 9$

> ▶ **Watch Video Solution**

46. Find each of the following products:

$(- 20) \times (- 2) \times (- 5) \times 7$

▶ Watch Video Solution

47. Find each of the following products:

$(- 1) \times (- 5) \times (- 4) \times (- 6)$

▶ Watch Video Solution

48. Verify

$(- 30) \times [13 + (- 3)] = [(- 30) \times 13] + [(- 30) \times (- 3)]$

▶ Watch Video Solution

49. In a class test containing 15 questions, 4 marks are give for every corret answer and (-2) marks are given for every incorrect answer. Gurpreet attempts all questions but only 9 of her answers are correct. What is her total score?

> ▶ **Watch Video Solution**

50. In a class test containing 15 questions, 4 marks are give for every corret answer and (-2) marks are given for every incorrect answer. One of her friends gets only 5 answers correct. What will be her score?

> ▶ **Watch Video Solution**

51. Suppose we represent the distance above the ground by a positive integer and that below the ground by a negative integer,

then answer the following:

An elevator descends into a mine shaft at the rate of 5 metre per minute. What will be its positin after one hour?

52. Find each of the following products:

$3 \times (- 1)$

53. Find each of the following products:

$(- 1) \times 225$

54. Find each of the following products:

$(-21) \times (-30)$

   A. 531

   B. 623

   C. 630

   D. -630

Answer: C

> ▶ **Watch Video Solution**

55. Find each of the following products:

$(-316) \times (-1)$

> ▶ **Watch Video Solution**

56. Find each of the following products:

$$(-15) \times 0 \times (-18)$$

57. Find each of the following products:

$$(-12) \times (-11) \times (10)$$

58. Find each of the following products:

$$9 \times (-3) \times (-6)$$

59. Find each of the following products:

$(- 18) \times (- 5) \times (- 4)$

60. Find each of the following products:

$(- 1) \times (- 2) \times (- 3) \times 4$

61. Find each of the following products:

$(- 3) \times (- 60 \times (- 2) \times (- 1)$

62. Verify the following:

$$18 \times [7 + (- 3)] = [18 \times 7] + [18 \times (- 3)]$$

▶ Watch Video Solution

63. Verify the following:

$$(- 21) \times [(- 4) + (- 6)] = [(- 21) \times (- 4)] + [(- 21) \times (- 6)]$$

▶ Watch Video Solution

64. For any integer a, what is $(- 1) \times a$ equal to?

▶ Watch Video Solution

65. Determine the integer whoses product with (-1) is

A. -22

B. 37

C. 0

D.

Answer:

▶ **Watch Video Solution**

---

66. Starting from $(-1) \times 5$, write various products showing some pattern to show $(-1) \times (-1) = 1$.

▶ **Watch Video Solution**

---

67. Find the product, using suitable properties:

$26 \times (-48) + (-48) \times (-36)$

68. Find the product, using suitable properties:

$8 \times 53 \times (- 125)$

Watch Video Solution

69. Find the product, using suitable properties:

$15 \times (- 25) \times (- 4) \times (- 10)$

Watch Video Solution

70. Find the product, using suitable properties:

$(- 41) \times 102$

Watch Video Solution

71. Find the product, using suitable properties:

$$625 \times (-35) + (-625) \times 65$$

72. Find the product, using suitable properties:

$$7 \times (50 - 2)$$

73. Find the product, using suitable properties:

$$(-17) \times (-29)$$

74. Find the product, using suitable properties:

$$(-57) \times (-19) + 57$$

75. A certain freezing process requires that room temperature be lowered from $40°C$ at the rate of $5°C$ every hour. What will be the room temperature 10 hours after the process begins?

76. In a class test containing 10 questions, 5 marks are awarded for every correct answer and (-2) marks are awarded for every incorrect answer and 0 for questions not attempted.

Mohan gets four correct and six incorrect answers. What is his score?

77. In a class test containing 10 questions, 5 marks are awarded for every correct answer and (-2) marks are awarded for every incorrect answer and 0 for questions not attempted.

Reshma gets five correct answers and five incorrect answers, what is her score?

▶ **Watch Video Solution**

78. In a class test containing 10 questions, 5 marks are awarded for every correct answer and (-2) marks are awarded for every incorrect answer and 0 for questions not attempted.

Heena gets two correct and five incorrect answers out of seven questions she attempts. What is her socre?

▶ **Watch Video Solution**

79. A cement company earns a profit of Rs.8 per bag of white cement sold and a loss of Rs.5 per bag of grey cement sold.

The company sells 3,000 bags of white cement and 5,000 bags of grey cement in a month. What is tis profit or loss?

▶ **Watch Video Solution**

80. A cement company earns a profit of Rs.8 per bag of white cement sold and a loss of Rs.5 per bag of grey cement sold.

What is the number of white cement bags it mus sell to have neither profit nor loss, if the number of grey bags sold is 6,400 bags.

▶ **Watch Video Solution**

81. Replace the blank with an interger to make it a true statement.

$(- 3) \times \_ \_ = 27$

82. Replace the blank with an interger to make it a true statement.

$5 \times \_\_\_ = -35$

▶ Watch Video Solution

83. Replace the blank with an interger to make it a true statement.

$\_\_\_ \times (-8) = -56$

▶ Watch Video Solution

84. Replace the blank with an interger to make it a true statement.

$\_\_\_ \times (-12) = 132$

▶ Watch Video Solution

85. In a test (+5) marks are give for every correct answer and (-2) marks are given for every incorrect answer.

Radhika answered all the questions and scored 30 marks though she got 10 correct answers.

86. In a test (+5) marks are give for every correct answer and (-2) marks are given for every incorrect answer.

Jay also answered all the questions and scored and scored (-12) marks though he got 4 correct answers. How many incorrect answers had they attempted?

87. A shopkeeper earns a profit of Rs.1 by selling one pen and incurs a loss of 40 pasie per pencil while selling pencils of her old stock.

In a particular month she incurs a loss of Rs.5. In this period, she sold 45 pens. How many pencils did she sell in this period?

> ▶ Watch Video Solution

88. A shopkeeper earns a profit of Rs.1 by selling one pen and incurs a loss of 40 pasie per pencil while selling pencils of her old stock. In the next month she earns neither profit nor loss. If she sold 70 pens, how many pencils did she sell?

> ▶ Watch Video Solution

89. Evaluate each of the following:

$(- 30) \div 10$

> ▶ Watch Video Solution

90. Evaluate each of the following:

$$50 \div (- 5)$$

91. Evaluate each of the following:

$$(- 36) \div (- 9)$$

92. Evaluate each of the following:

$$(- 49) \div (49)$$

93. Evaluate each of the following:

$13 \div [(- 2) + 1]$

94. Evaluate each of the following:

$0 \div (- 12)$

95. Evaluate each of the following:

$(- 31) \div [(- 30) + (- 1)]$

96. Evaluate each of the following:

$$[(- 36) \div 12] \div 3$$

▶ Watch Video Solution

97. Evaluate each of the following:

$$[(- 16) + 5] \div [(- 2) + 1]$$

▶ Watch Video Solution

98. Verify that $a \div (b + c) \neq (a \div b) + (a \div c)$ for each of the following values of a,b and c.

a = 12,b = -4, c = 2

▶ Watch Video Solution

99. Verify that $a \div (b + c) \neq (a \div b) + (a \div c)$ for each of the following values of a,b and c.

a = (-10),b = 1,c = 1

100. Fill in the blanks:

$$369 \div \_ \_ = 369$$

101. Fill in the blanks:

$$(-75) \div \_ \_ = -1$$

102. Fill in the blanks:

$$(-206) \div \underline{} \ \underline{} = 1$$

103. Fill in the blanks:

$$-87 \div \underline{} \ \underline{} = 87$$

104. Fill in the blanks:

$$\underline{} \div 1 = -87$$

105. Fill in the blanks:

$$\_\_ \div 48 = -1$$

106. Fill in the blanks:

$$20 \div \_ \_\_ \_ = -2$$

107. Fill in the blanks:

$$\_\_ \_\div (4) = -3$$

108. Write five pairs of integers (a,b) such that $a \div b = -3$. One such pair is (6,-2) because $6 \div (-2) = (-3)$

109. The temperature at 12 noon was $10° C$ above zero. If it decreases at the rate of $2° C$ per hour until midnight, at what time would the temperature be $8° C$ below zero? What would be the temperature at mid-night?

110. In a class test (+3) marks are given for every correct answer and (-2) marks are given for every incorrect answer and no marks fornot attempting any question.

Radhika scored 20 marks. If she has got 12 correct answers, how many questions has she attmepted incorrectly?

111. In a class test (+3) marks are given for every correct answer and (-2) marks are given for every incorrect answer and no marks fornot attempting any question.

Mohini scores -5 marks in this test, though she has got 7 correct answers. How many questions has she attempted incorrectly?

112. An elevator descends into a mine shaft at the rate of $6m /\ \min$. If the descent starts frm 10m above the ground level, how long will it take to reach -350 m.

1. Evaluate each of the following:

$(- 30) \div 10$

▶ Watch Video Solution

2. Evaluate each of the following:

$50 \div (- 5)$

▶ Watch Video Solution

3. Evaluate each of the following:

$(- 36) \div (- 9)$

▶ Watch Video Solution

4. Evaluate each of the following:

$(- 49) \div (49)$

5. Evaluate each of the following:

$13 \div [(- 2) + 1]$

6. Evaluate each of the following:

$0 \div (- 12)$

7. Evaluate each of the following:

$$(- 31) \div [(- 30) + (- 1)]$$

8. Evaluate each of the following:

$$[(- 36) \div 12] \div 3$$

9. Evaluate each of the following:

$$[(- 6) + 5] \div [(- 2) + 1]$$

10. Verify that $a \div (b + c) \neq (a \div b) + (a \div c)$ for each of the following values of a,b and c.

a = 12,b = -4, c = 2

▶ Watch Video Solution

11. Verify that $a \div (b + c) \neq (a \div b) + (a \div c)$ for each of the following values of a,b and c.

a = (-10),b = 1,c = 1

▶ Watch Video Solution

12. Fill in the blanks:

$369 \div \_ \ \_ = 369$

▶ Watch Video Solution

13. Fill in the blanks:

$$(-75) \div \underline{} \underline{} = -1$$

14. Fill in the blanks:

$$(-206) \div \underline{} \underline{} = 1$$

15. Fill in the blanks:

$$-87 \div \underline{} \underline{} = 87$$

16. Fill in the blanks:

$$\_\_ \div 1 = -87$$

17. Fill in the blanks:

$$\_\_ \div 48 = -1$$

18. Fill in the blanks:

$$20 \div \_\ \_\_ \ \_ = -2$$

19. Fill in the blanks:

$$\_\_ \ \_\div \ (4) \ = \ -3$$

20. Write five pairs of integers (a,b) such that $a \div b = -3$. One such pair is (6,-2) because $6 \div (-2) = (-3)$

21. The temperature at 12 noon was $10°C$ above zero. If it decreases at the rate of $2°C$ per hour until midnight, at what time would the temperature be $8°C$ below zero? What would be the temperature at mid-night?

22. In a class test (+3) makrs are given for every correct answer and (-2) marks are given for every incorrect answer and no marks for not attempting any question.

Radhika scored 20 marks. If she has got 12 correct answer, how many questions has she attempted incorrecly?

23. In a class test (+3) marks are given for every correct answer and (-2) marks are given for every incorrect answer and no marks fornot attempting any question.

Mohini scores -5 marks in this test, though she has got 7 correct answers. How many questions has she attempted incorrectly?

24. An elevator descends into a mine shaft at the rate of $6m/\min$. If the descent starts frm 10m above the ground level, how long will it take to reach -350 m.