MATHS

BOOKS - HT Olympiad Previous Year Paper

INTEGERS

Mathematical Reasoning

1. If * is an operation between m and n such that m* n means m - (-n), then simplify (-6) *

(-4).

A. 10

B. -10

C. -8

D. 8

Answer: B

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2. The preceding number of the number -6 is

A. 6

B. -7

C. -5

D. 5

Answer: B

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3. Find the sum of -23, 18, -26 and -57

A. -40

B. -88

C. -60

D. -20

Answer: B

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4. The additive inverse of the sum of the integers -9853 and -3187 is _____

A. 6666

B. 4031

C. 10340

D. 13040

Answer: D

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5. Which sign will come in the box to make the expression true?

$$(- 6) + (- 5) - 2 \, \square \, (- 6) + (- 5 - 2)$$

A. $<$

B. $>$

C. $=$

D. None of these

Answer: C

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6. Find the sum of the three integers lies between -2 and 2.

A. 0

B. 1

C. -1

D. 4

Answer: A

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7. Select the correct statement.

A. If the dividend and divisor have opposite signs, then the quotient will be negative.

B. If the two factors of a number are of same sign, then their product is positive.

C. If the addends are of same sign, then sign of their sum is same as the sign of the addends.

D. All of these

Answer: D

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8. Which of the following shows the maximum rise in temperature?

 A. $0°C$ to $10°C$

 B. $-4°C$ to $8°C$

 C. $-15°C$ to $-8°C$

 D. $-7°C$ to $0°C$

Answer: B

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9. Which of the following is incorrect?

A. Positive integer $>$ zero $>$ negative integer

B. Positive integer $>$ negative integer $<$ zero

C. Zero $<$ positive integer $>$ negative integer

D. Positive integer $>$ zero $<$ negative integer

Answer: D

10. In which of the following pairs of integers, the first integer is not on the left of the other integer on the number line?

    A. (-1, 10)

    B. (-3, -5)

    C. (-5, -3)

    D. (-6, 0)

Answer: B

11. Subtract the largest 4-digit even positive integer from the largest 5-digit odd negative integer?

A. 19999

B. 19998

C. -19998

D. -19999

Answer: D

12. Which of the following is correct?

A. $-99 < 0 < 2 < -37$

B. $-99 < -37 < 0 < 2$

C. $-37 < 0 < 2 < -99$

D. $-37 < -99 < 0 < 2$

Answer: B

13. Sum of two integers is -35. If one of them is

15, then other one is

    A. 20

    B. -20

    C. -50

    D. 50

Answer: C

14. What should be added to -12 + (-98) - (-84) + (-7) to make 30?

A. -63

B. 63

C. -33

D. 33

Answer: B

15. 1 is the ____ positive integer but ____ is the largest negative integer.

  A. largest, -1000

  B. smallest, -10

  C. largest, -1

  D. smallest, -1

Answer: D

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16. Multiplying a negative integer for even number of times gives a _____ result.

A. Positive

B. Negative

C. 0

D. Both (A) and (B)

Answer: A

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17. The integer which is '5 units to the right of 0 on the number line' is.

A. $+5$

B. -5

C. $+4$

D. -4

Answer: B

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18. Which of the following options shows the given number sentence?

$$-13 + (-3) = -16$$

   A. When two positive integers are added, we get a positive integer.

   B. When two negative integers are added, we get a negative integer.

   C. The subtraction of an integer is the same as the addition of its additive inverse

D. All of these

Answer: D

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19. Subtract the sum of -125 and 120 from the difference (-160 - (-240)).

A. -85

B. 80

C. 5

D. 85

Answer: A

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20. Amulya and Amar visited two places A and B respectively in Kashmir and recorded the minimum temperatures on a particular day as $-4°C$ at A and $-1°C$ at B. Which of the following statement is true?

A. A is cooler than B.

B. B is cooler than A

C. There is a difference of $2°C$ in the temperature.

D. The temperature at A is $4°C$ higher than that at B

Answer: A

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Everyday Mathematics

1. Sunil has Rs 35 in his metro card but his journey costs Rs 42. What amount will be shown by the machine in the card at the time of exit?

A. Rs 7

B. Rs (-7)

C. Rs (-9)

D. Rs 6

Answer: B

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2. In a set of 12 questions, 4 marks are awarded for every correct answer and -2 marks for every wrong answer. Smriti gave five correct and seven wrong answers. What is her score?

A. 6

B. 8

C. 9

D. 12

Answer: A

3. Manya travelled 465 km towards South and Ananya travelled 644 km towards North from the same point. Find the distance between their final destination.

   A. 1109 km

   B. -1109 km

   C. 1080 km

D. 179 km

Answer: A

4. Arun has Rs125 in his savings account. He withdraws Rs 117, makes a deposit of Rs 45 and then withdraws another Rs 69. Find the amount left in his account. (Write the amount as an integer.)

A. Rs (-16)

B. Rs 16

C. Rs 30

D. Rs 30

Answer: A

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5. On one day, the temperature on a hill at 8 p.m. was $2°C$ but at mid-night, it fell down to $-3°C$. By how many degrees did the temperature fall?

A. $5^\circ C$

B. $6^\circ C$

C. $7^\circ C$

D. $8^\circ C$

Answer: A

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Achievers Section Hots

1. Fill in the blanks.

(i) The additive identity of the integers is P

(ii) The integer which is 8 less than - 24 is Q

(iii) Every integer less than zero is R

A.
P	Q	R
0	-32	negative

B.
P	Q	R
1	-32	positive

C.
P	Q	R
0	-16	negative

D.
P	Q	R
1	-32	negative

Answer: A

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2. Match the following.

Column I	Column II
(i)	(a) 5 – 9
(ii)	(b) 4 – 8
(iii)	(c) –3 + 6
(iv)	(d) –4 + 4

A. (i) → (a), (ii) → (c), (iii) → (d), (iv)

→ (b)

B. (i) → (c), (ii) → (a), (iii) → (d), (iv)

→ (b)

C. (i) $\rightarrow$ (d), (ii) $\rightarrow$ (c), (iii) $\rightarrow$ (b), (iv)

$\rightarrow$ (a)

D. (i) $\rightarrow$ (b), (ii) $\rightarrow$ (d), (iii) $\rightarrow$ (a), (iv)

$\rightarrow$ (c)

Answer: D

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3. Which of the following statements is incorrect?

A. All negative numbers are less than 0.

B. There is no greatest or smallest integer.

C. If x and y are integers, then (x - y) is also an integer

D. $-21 < -25$, since -25 lies on the left of -21 on the number line.

Answer: D

4. State 'T' for true and 'F' for false.

(i) Since, $5 > 3$. Therefore, $-5 > -3$.

(ii) The difference between an integer and its additive inverse is always even.

(iii) The sum of three different integers can never be zero.

(iv) All whole numbers are integers.

A.
(i)	(ii)	(iii)	(iv)
T	F	T	F

B.
(i)	(ii)	(iii)	(iv)
F	F	T	T

C.
(i)	(ii)	(iii)	(iv)
F	T	F	T

	(i)	(ii)	(iii)	(iv)
D.	T	T	F	F

Answer: C

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5. Match the following.

	Column I	Column II
(i)	The additive inverse of 2	(a) 0
(ii)	The greatest negative integer	(b) –2
(iii)	The smallest integer greater than every negative integer	(c) 2
(iv)	Sum of predecessor and successor of 1	(d) –1

A. (i) $\rightarrow$ (c), (ii) $\rightarrow$ (d), (iii) $\rightarrow$ (a), (iv)

$\rightarrow$ (b)

B. (i) $\rightarrow$ (b), (ii) $\rightarrow$ (d), (iii) $\rightarrow$ (a), (iv)

$\rightarrow$ (c)

C. (i) $\rightarrow$ (c), (ii) $\rightarrow$ (d), (iii) $\rightarrow$ (b), (iv)

$\rightarrow$ (a)

D. (i) $\rightarrow$ (b), (ii) $\rightarrow$ (c), (iii) $\rightarrow$ (a), (iv)

$\rightarrow$ (d)

Answer: B

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