

Integers

Mathematics · Class 6 · Topic-wise Practice Worksheet

TIME 45 minutes	QUESTIONS 18	TOTAL MARKS 24	MAX. SCORE ___ / 24
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Name: _____ Class/Sec: _____ Date: _____

INSTRUCTIONS

- There are **18 questions** in this worksheet. All questions are compulsory.
- Each question has four options (A), (B), (C) and (D). Exactly **one** option is correct.
- Questions 1–15 carry **1 mark** each. Questions 16–18 (Achievers Section) carry **3 marks** each.
- There is no negative marking. Use of a calculator is **not** allowed.
- Rough work may be done in the space at the side of each page.

Section A — Mathematical Reasoning

Q1–Q8 · 1 mark each

1. Which of these integers is the **smallest**?

- | | |
|---------|--------|
| (A) 0 | (B) -8 |
| (C) -15 | (D) 6 |

2. $(-12) + 7 =$ _____

- | | |
|---------|--------|
| (A) -19 | (B) 19 |
| (C) 5 | (D) -5 |

3. $(-9) - (-14) =$ _____

- | | |
|---------|--------|
| (A) 5 | (B) -5 |
| (C) -23 | (D) 23 |

4. $(-6) \times (-7) =$ _____

- | | |
|---------|---------|
| (A) -42 | (B) -13 |
| (C) 42 | (D) 13 |

5. $(-56) \div 8 =$ _____

- | | |
|---------|--------|
| (A) 48 | (B) 7 |
| (C) -48 | (D) -7 |

6. The additive inverse of -23 is _____.

- | | |
|--------|--------------------|
| (A) 23 | (B) -23 |
| (C) 0 | (D) $\frac{1}{23}$ |

7. Which of these statements is **true**?

- | | |
|---------------|---------------|
| (A) $-7 > -3$ | (B) $-7 = -3$ |
| (C) $-7 < -3$ | (D) $-7 > 0$ |

8. The value of $(-1) \times (-1) \times (-1) \times (-1) \times (-1)$ is _____.

(A) -5

(B) 5

(C) 1

(D) -1

Section B — Everyday Mathematics and Reasoning

Q9–Q15 · 1 mark each

9. On the number line shown, which labelled point represents -3?

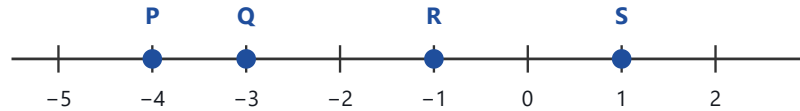


Fig. 9.1

(A) P

(B) Q

(C) R

(D) S

10. The temperature at 6 a.m. was -4°C . By noon it had risen by 11°C . What was the temperature at noon?

(A) 7°C

(B) -7°C

(C) -15°C

(D) 15°C

11. A submarine is at a depth of 250 m below sea level. It rises 80 m. What is its new position?

(A) 330 m below sea level

(B) 170 m below sea level

(C) 170 m above sea level

(D) 80 m below sea level

12. In a quiz, 5 marks are given for a correct answer and -2 for a wrong one. Riya answered 12 questions correctly and 9 wrongly. What was her total score?

(A) 36

(B) 42

(C) 48

(D) 78

13. Find the value of $(-25) + 18 + (-12) + 30$.

(A) -11

(B) -85

(C) 11

(D) 85

14. How many integers lie strictly between -4 and 3 ?

(A) 5

(B) 6

(C) 7

(D) 8

15. Which of these expressions has the **greatest** value?

(A) $(-8) + 3$

(B) $(-8) - 3$

(C) $(-8) \times 3$

(D) $(-8) \div 4$

Achievers Section

Q16–Q18 · 3 marks each

16. Consider the following statements.

(i) The sum of two negative integers is always negative.

(ii) Zero is neither positive nor negative.

(iii) The product of a positive and a negative integer is always positive.

Which of the statements is/are correct?

(A) (i) and (ii) only

(B) (ii) and (iii) only

(C) (i) and (iii) only

(D) All three

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Answer Key

1	C	2	D	3	A	4	C	5	D
6	A	7	C	8	D	9	B	10	A
11	B	12	B	13	C	14	B	15	D
16	A	17	A	18	B				

Solutions

1. Answer: (C) -15

On the number line, the further left a number lies the smaller it is. Among -15, -8, 0 and 6, the leftmost is **-15**. With negative numbers, the larger the digit the smaller the value.

2. Answer: (D) -5

The signs are different, so subtract the smaller size from the larger and keep the sign of the larger.
 $12 - 7 = 5$, and 12 is the larger with a minus sign, so the answer is **-5**.

3. Answer: (A) 5

Subtracting a negative is the same as adding a positive.
 $(-9) - (-14) = -9 + 14 = 5$.

4. Answer: (C) 42

The product of two negative numbers is positive.
 $(-6) \times (-7) = 42$.

5. Answer: (D) -7

A negative divided by a positive gives a negative.
 $56 \div 8 = 7$, so the answer is **-7**.

6. Answer: (A) 23

The additive inverse is the number that gives 0 when added.
Since $-23 + 23 = 0$, the additive inverse is 23.

7. Answer: (C) $-7 < -3$

On the number line -7 lies to the left of -3, so **$-7 < -3$** . Every negative number is also less than 0.

8. Answer: (D) -1

(-1) raised to an odd power is -1 and to an even power is 1. Here there are 5 factors, an odd number, so the product is **-1**.

9. Answer: (B) Q

Reading the scale, point **Q** sits directly above the mark labelled -3. (P is -4, R is -1 and S is 1.)

10. Answer: (A) 7 °C

A rise means we add.
 $-4 + 11 = 7$ °C.

11. Answer: (B) 170 m below sea level

Take below sea level as negative: the submarine is at -250 m. Rising 80 m adds 80.
 $-250 + 80 = -170$, which is **170 m below sea level**.

12. Answer: (B) 42

Marks for correct answers = $12 \times 5 = 60$.
Marks for wrong answers = $9 \times (-2) = -18$.
Total = $60 - 18 = 42$.

13. Answer: (C) 11

Add the positives and the negatives separately.
Positives: $18 + 30 = 48$.
Negatives: $-25 - 12 = -37$.
Total = $48 - 37 = 11$.

14. Answer: (B) 6

The integers between them are -3, -2, -1, 0, 1 and 2 — that is **6** integers. 'Strictly between' means -4 and 3 themselves are not counted.

15. Answer: (D) $(-8) \div 4$

Work each one out:

$$(-8) + 3 = -5$$

$$(-8) - 3 = -11$$

$$(-8) \times 3 = -24$$

$$(-8) \div 4 = -2$$

All four are negative, and the one closest to zero is the greatest. So the answer is **$(-8) \div 4 = -2$** .

16. Answer: (A) (i) and (ii) only

Statement (i) is true — adding two numbers to the left of zero moves further left. Statement (ii) is true. Statement (iii) is false; a positive times a negative is always **negative**, as in $3 \times (-4) = -12$. Hence **(i) and (ii)**.

17. Answer: (A) 3rd basement

Track the moves as integers.

$$8 - 12 = -4$$

$$-4 + 5 = 1$$

$$1 - 4 = -3$$

So the lift stops at -3 , which is the **3rd basement**.

18. Answer: (B) 55

$$a^2 = (-5) \times (-5) = 25.$$

$$2ab = 2 \times (-5) \times 3 = -30.$$

$$a^2 - 2ab = 25 - (-30) = 25 + 30 = \mathbf{55}.$$