

# Class 8 Maths – Chapter 1 Worksheet

## Rational Numbers (Full Practice)

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### Section A: Concept Basics

1. Which of the following are rational numbers?

- a)  $\sqrt{5}$
  - b)  $-7/3$
  - c) 0
  - d)  $\pi$
  - e) 9
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2. Write each of the following as a rational number (p/q):

- a) 6
  - b) -10
  - c) 0
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3. True or False:

- a) Every rational number has a reciprocal
  - b) Zero has a reciprocal
  - c) Rational numbers are closed under addition
  - d) Rational numbers are closed under division
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### Section B: Number Line & Ordering

4. Represent on number line:

- a)  $-1/2$
  - b)  $3/2$
  - c)  $-5/4$
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5. Arrange in ascending order:

- a)  $2/3, -1/3, 4/3, 0$
  - b)  $-7/5, -2/5, 3/5, 1/5$
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### Section C: Operations

**6. Find:**

- a)  $\frac{3}{4} + \frac{5}{6}$
  - b)  $\frac{7}{9} - \frac{2}{3}$
  - c)  $-\frac{5}{8} + \frac{3}{4}$
  - d)  $\frac{11}{12} - \frac{5}{6}$
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**7. Multiply:**

- a)  $(\frac{2}{3}) \times (\frac{9}{4})$
  - b)  $(-\frac{5}{7}) \times (\frac{14}{3})$
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**8. Divide:**

- a)  $(\frac{3}{5}) \div (\frac{2}{7})$
  - b)  $(-\frac{8}{9}) \div (\frac{4}{3})$
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 **Section D: Properties**

**9. Verify commutative property for addition:**

Take  $a = \frac{2}{3}$ ,  $b = \frac{5}{6}$  and show  $a + b = b + a$

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**10. Verify associative property:**

Take  $a = \frac{1}{2}$ ,  $b = \frac{1}{3}$ ,  $c = \frac{1}{4}$

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**11. Find the additive inverse of:**

- a)  $\frac{7}{8}$
  - b)  $-\frac{3}{5}$
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**12. Find the multiplicative inverse of:**

- a)  $\frac{9}{11}$
  - b)  $-\frac{4}{7}$
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 **Section E: Word Problems**

**13. A rope is  $\frac{5}{6}$  m long. Another piece of  $\frac{2}{3}$  m is added. What is the total length?**

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14. A student spent  $\frac{3}{5}$  hour studying maths and  $\frac{2}{5}$  hour reading. How much total time did the student study?

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15. A tank has  $\frac{7}{8}$  litre of water.  $\frac{3}{4}$  litre is used. How much water remains?

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 **Section F: HOTS (Higher Order Thinking)**

16. Find three rational numbers between  $\frac{1}{2}$  and  $\frac{2}{3}$

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17. If  $a + b = 0$ , what can you say about  $a$  and  $b$ ?

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18. Find a rational number which when added to  $\frac{5}{6}$  gives 1