Chapter 2

1. Which of the following is not a linear equation?
   a. $x+y-2=0$ b. $2x+5=11$ c. $4x^2=15$ d. $\frac{2}{x}=9$

2. The solution of the equation $ax + b = 0$ is
   a. $\frac{-a}{b}$. b. $\frac{a}{b}$. c. $\frac{b}{a}$. d. $\frac{-b}{a}$.

3. The solution of the equation $3x - 1 = x + 3$ is
   a. $x=1$. b. $x=3$. c. $x=2$. d. $x=0$.

4. If $6 = \frac{2}{3}(5x - 1)$, then the value of x is
   a. 5. b. 2. c. 3. d. 6.

5. The solution of the equation $4x - \frac{2}{3} = \frac{25}{3} + x$ is
   a. $x=4$. b. $x=2$. c. $x=5$. d. $x=3$.

6. '–1' is not a solution of the equation
   a. $x+1=0$. b. $x-1=2$.
   c. $2x+3=1$. d. $\frac{5}{2}x+\frac{11}{3}=\frac{x}{2}+\frac{5}{3}$.

7. If p and q are positive integers, then the solution of the equation $px = q$ is always a
   a. positive integer. b. positive rational number.
   c. negative integer. d. negative rational number.

8. If $\frac{2}{5x} - \frac{5}{3x} = \frac{1}{15}$, then x is equal to
   a. –5. b. –10. c. –15. d. –19.

9. The digit at tens place of a two digit number is three times the digit at one's place. If the digit at one place is x, then the number in terms of x is
   a. $4x$. b. $31x$. c. $13x$. d. $11x$.

10. If the sum of three consecutive positive integers is 48 then the smallest integer is
    a. 16. b. 24. c. 15. d. 17.

Chapter 3

1. Number of diagonals in a convex quadrilateral is
   a. 4. b. 2. c. 1. d. 3.

2. The number of sides of a regular polygon having an angle sum of 1440° is
   a. 9. b. 12. c. 10. d. 14.

3. The measure of each exterior angle of a regular polygon is 20°. The number of sides of the polygon is
   a. 9. b. 18. c. 12. d. 24.

4. If the angles of a quadrilateral are $(2x + 10)°$, $(3x + 15)°$, $(2x - 10)°$ and $(3x - 5)°$, then the measure of its greatest angle is
   a. 160°. b. 120°. c. 100°. d. 80°.

5. In Figure 1, the value of x is
   a. 100°. b. 90°.
   c. 110°. d. 260°.

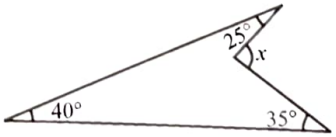

Fig. 1

Multiple-choice Questions

Select the correct answer.

Chapter 1

1. $\frac{-2}{-19}$ is

   a. a positive rational number.
   b. either a positive or a negative rational number.
   c. neither a positive nor a negative rational number.
   d. a negative rational number.

2. Rational number $\frac{-11}{7}$ lies between

   a. 0 and 1.
   b. 0 and –1.
   c. –1 and –2.
   d. –2 and –3.

3. If $\left(\frac{-2}{15}\right) + \left(\frac{-13}{5}\right) = \left(\frac{-13}{5}\right) + \frac{a}{b}$, then $\frac{a}{b}$ is equal to

   a. 0.
   b. $\frac{15}{-2}$.
   c. $\frac{-2}{15}$.
   d. $\frac{2}{15}$.

4. If $\frac{19}{-5} + \left[\frac{-3}{11} + \left(\frac{-7}{8}\right)\right] = \left[\frac{19}{-5} + \left(\frac{a}{b}\right)\right] + \left(\frac{-7}{8}\right)$, then $\frac{a}{b}$ is equal to

   a. $\frac{3}{11}$.
   b. $\frac{7}{8}$.
   c. $\frac{8}{-7}$.
   d. $\frac{-3}{11}$.

5. The property of rational numbers illustrated by the mathematical expression $\left(\frac{2}{9} + \frac{-3}{5}\right) \times \frac{4}{7} = \left(\frac{2}{9} \times \frac{4}{7}\right) + \left(\frac{-3}{5} \times \frac{4}{7}\right)$ is

   a. commutativity of multiplication.
   b. distributivity of multiplication over addition.
   c. associativity of multiplication.
   d. associativity of addition.

6. If the sum of two rational numbers is $\frac{9}{10}$ and one of them is $\frac{-3}{5}$, then what is the other number is

   a. $\frac{-3}{2}$.
   b. $\frac{3}{2}$.
   c. $\frac{2}{3}$.
   d. $\frac{-2}{3}$.

7. By what rational number should $-2\frac{1}{3}$ be multiplied to get $-8\frac{3}{4}$ as a product?

   a. $-4\frac{3}{4}$
   b. $3\frac{3}{4}$
   c. $-3\frac{3}{4}$
   d. $4\frac{3}{4}$

8. Which of the following statements is true?

   a. $\frac{-13}{15} \div \frac{3}{-5} = \frac{3}{-5} \div \frac{-13}{15}$
   b. $\left(\frac{2}{5} \div \frac{3}{-7}\right) \div \frac{1}{2} = \frac{2}{3} \div \left(\frac{3}{-7} \div \frac{1}{2}\right)$
   c. $\left(\frac{1}{5} - \frac{2}{3}\right) \div \frac{5}{11} = \frac{1}{5} \div \frac{5}{11} - \frac{2}{3} \div \frac{5}{11}$
   d. $\frac{-4}{9} \div \left(\frac{13}{12} \div \frac{12}{-5}\right) = \left(\frac{-4}{9} \div \frac{13}{12}\right) \div \frac{12}{-5}$

9. The sum of the multiplicative inverse and additive inverse of 2 is

   a. $\frac{3}{2}$.
   b. $\frac{-3}{2}$.
   c. $\frac{5}{2}$.
   d. $\frac{-5}{2}$.