1. Solve the pair of linear equations: 2x + 3y = 6 and 4x + 6y = 12.
A) x = 3, y = 0
B) x = 0, y = 2
C) Infinite solutions
D) No solution

2. For what value of k will the following system of equations have no solution: x + 3y = 1 and (2k 1) x + (6k 2)y = 2?
A) k = 1
B) k = 1/3
C) k = 2
D) k = 0

3. What is the value of x in the system of equations 4x 5y = -1 and 3x + 2y = 12?
A) x = 3
B) x = 4
C) x = 2
D) x = 1

4. If the system of equations 3x + ky = 12 and 6x + 2ky = 24 has infinitely many solutions, what is the value of k?
A) k = 1
B) k = 2
C) k = 3
D) k = 4

5. Solve the pair of linear equations: x/2 + y/4 = 1 and x/4 + y/8 = 0.5
A) x = 2, y = 2
B) x = 4, y = 0
C) x = 0, y = 4
D) x = 1, y = 3

6. Which of the following pairs of equations would have exactly one solution?
A) 2x + 3y = 6 and 4x + 6y = 12
B) x + y = 5 and 2x + 2y = 10
C) x y = 2 and 2x 2y = 4
D) 3x + 4y = 7 and 6x 8y = 12

7. The sum of the ages of two friends is 44 years. Four years ago, the ratio of their ages was 5:6. What are their present ages?
A) 20 years and 24 years
B) 18 years and 26 years
C) 22 years and 22 years
D) 24 years and 20 years

8. A father is three times as old as his son. After 15 years, the father will be twice as old as his son's age at that time. What are their current ages?
A) Father: 45 years, Son: 15 years
B) Father: 30 years, Son: 10 years
C) Father: 60 years, Son: 20 years
D) Father: 50 years, Son: 17 years

9. If 2x 3y = 7 and (1/2) x + y = 4, then what is the value of y?
A) y = 3
B) y = 5
C) y = 1
D) y = 2

10. If the ratio of the coefficients of x in two equations is 1:2 and the ratio of the coefficients of y is 2:3, and the ratio of the constant terms is 3:4, will the system have a unique solution?
A) Yes
B) No
C) Cannot be determined
D) It will have infinitely many solutions

11. What is the solution to the system of equations: 7x 5y = 2 and 14x 10y = 4?
A) x = 2, y = 1
B) x = 1, y = 1
C) No solution
D) Infinitely many solutions

12. Which of the following systems of equations represents parallel lines?
A) 2x + 3y = 6 and 4x + 6y = 12
B) x + y = 1 and x y = 1
C) 3x +

2y = 6 and 6x + 4y = 8
D) 3x 2y = 6 and -6x + 4y = 12

13. If one equation in a system is 3x + 4y = 12, which of the following would be the equation of a line perpendicular to it?
A) 4x 3y = 12
B) 3x 4y = 12
C) 4x + 3y = 12
D) -3x + 4y = 12

14. The cost of 2 pens and 3 pencils is 18 units. If the cost of 4 pens and 6 pencils is 36 units, what is the cost of one pen?
A) 3 units
B) 6 units
C) 9 units
D) 12 units

15. Two numbers are in the ratio 3:4. If their LCM is 24, what is the sum of the numbers?
A) 14
B) 21
C) 28
D) 7

16. A boat goes 30 km upstream and 44 km downstream in 10 hours. In 13 hours, it can go 40 km upstream and 55 km downstream. Find the speed of the boat in still water and the speed of the stream.

A) Boat: 7 km/hr, Stream: 3 km/hr
B) Boat: 5 km/hr, Stream: 2 km/hr
C) Boat: 8 km/hr, Stream: 3 km/hr
D) Boat: 10 km/hr, Stream: 4 km/hr

17. If a pair of linear equations is represented by ax + by = c and dx + ey = f, which condition shows that the lines are coincident?
A) ae bd = cf
B) af cd = be
C) ad bc = ef
D) a/d = b/e = c/f

18. What are the values of (x) and (y) if (3x + 5y = 20) and (4x + y = 10)?
A) (x = 3, y = 1)
B) (x = 2, y = 4)
C) (x = 1, y = 3)
D) (x = 4, y = 2)

19. Which of the following is not a method to solve a pair of linear equations?
A) Substitution Method
B) Elimination Method
C) Cross-Multiplication Method
D) Division Method

20. The age of a mother is three times that of her daughter. Ten years later, the mother's age will be twice that of her daughter. The current age of the daughter is:
A) 10 years
B) 15 years
C) 20 years
D) 25 years

Answer Key

1. C) Infinite solutions
2. B) k = 1/3
3. B) x = 4
4. A) k = 1
5. B) x = 4, y = 0
6. D) 3x + 4y = 7 and 6x 8y = 12
7. A) 20 years and 24 years
8. A) Father: 45 years, Son: 15 years
9. B) y = 5
10. D) It will have infinitely many solutions
11. D) Infinitely many solutions
12. A) 2x + 3y = 6 and 4x + 6y = 12
13. A) 4x 3y = 12
14. B) 6 units
15. A) 14
16. B) Boat: 5 km/hr, Stream: 2 km/hr
17. D) (frac{a}{d} = frac{b}{e} = frac{c}{f})
18. B) (x = 2, y = 4)

19. D) Division Method
20. B) 15 years

These questions are crafted to cover a range of difficulties and concepts related to solving linear equations. The answer key reflects the correct choice for each question.