MBA PRO 2025

Quantitative Aptitude

DPP: 2

Basics of Equations

Q1 If x+5y=16 and x = -3y then y =
(A) -8 (B) 2
(C) 8 (D) -2

Q2 Solve the equations x+y = 7, 3x-2y = 11, and then find the value of x and y.
(A) x = 5, y = 2
(B) x = 3, y = 1
(C) x = 2, y = 5
(D) x = -1, y = 3

Q3 Solve the equations -6x + 5y = 2 and -5x + 6y = 9 and find the value of x and y.
(A) x = 5, y = 6
(B) x = 5, y = 4
(C) x = 4, y = 3
(D) x = 3, y = 4

Q4 4x+3y = -2 and 3x + 6=0, what is the value of y?
(A) 3 (B) 1
(C) 2 (D) $\frac{2}{3}$

Q5 10 Years later, Betty's age will be twice of his present age. Find Betty's age now.
(A) 10 (B) 5
(C) 20 (D) 8

Q6 Solve: $x^2 + 5x + 6 = 0$
(A) x = 2 or x = 3
(B) x = -2 or x = -3
(C) x = -2 or x = 3
(D) x = 2 or x = -3

Q7 Solve: $x^2 + 5x - 6 = 0$
(A) x = 1 or x = -6
(B) x = -1 or x = 6
(C) x = -1 or x = -6
(D) x = 1 or x = 6

Q8 Solve : $2x^2 + 7x + 6 = 0$
(A) x = 2 or x = $\frac{3}{2}$
(B) x = -2 or x = $\frac{3}{2}$
(C) x = 2 or x = $-\frac{3}{2}$
(D) x = -2 or $-\frac{3}{2}$

Q9 Solve: $x^2 - 10x + 24 = 0$
(A) x = -4 or x = -6
(B) x = -4 or x = 6
(C) x = 4 or x = 6
(D) x = 4 or x = -6

Q10 Solve: $9x^2 - 3x - 2 = 0$
(A) x= $-\frac{2}{3}$ or x = $-\frac{1}{3}$
(B) x = $\frac{2}{3}$ or x = $-\frac{1}{3}$
(C) x = $\frac{2}{3}$ or x = $\frac{1}{3}$
(D) x = $-\frac{2}{3}$ or x = $\frac{1}{3}$

Q11 Solve: $5x^2 + 6x + 1 = 0$
(A) x = $-\frac{1}{5}$ or x = 1
(B) x = $\frac{1}{5}$ or x = 1
(C) x = $-\frac{1}{5}$ or x = -1
(D) x = $\frac{1}{5}$ or x = -1

Q12 Solve: $38x^2 - 3x - 11 = 0$
(A) x = $\frac{1}{2}$ or x = $\frac{11}{19}$
(B) x = $-\frac{1}{2}$ or x = $\frac{11}{19}$
(C) x = $\frac{1}{2}$ or x = $-\frac{11}{19}$
(D) x = $-\frac{1}{2}$ or x = $-\frac{11}{19}$

Q13 Solve: $24x^2 + 11x + 1 = 0$

(A) $x = -\frac{1}{8}$ or $x = \frac{1}{3}$

(B) $x = \frac{1}{8}$ or $x = -\frac{1}{3}$

(C) $x = -\frac{1}{8}$ or $x = -\frac{1}{3}$

(D) $x = \frac{1}{8}$ or $x = \frac{1}{3}$

Q14 Solve: $2x^2 + 19x + 44 = 0$

(A) $x = 4$ or $x = -\frac{11}{2}$

(B) $x = -4$ or $x = -\frac{11}{2}$

(C) $x = -4$ or $x = \frac{11}{2}$

(D) $x = 4$ or $x = \frac{11}{2}$

Q15 Solve : $x^2 - 6x = 7$

(A) $x = 1$ or $x = 7$

(B) $x = 1$ or $x = -7$

(C) $x = 1$ or $x = 7$

(D) $x = -1$ or $x = 7$

Answer Key

Q1	(C)
Q2	(A)
Q3	(D)
Q4	(C)
Q5	(A)
Q6	(B)
Q7	(A)
Q8	(D)
Q9	(C)
Q10	(B)
Q11	(C)
Q12	(B)
Q13	(C)
Q14	(B)
Q15	(D)

Hints & Solutions

Note: scan the QR code to watch video solution

Q1 Text Solution:

In this question value of x = -3y put this value in the equation x+5y = 16

-3y+5y = 16

2y = 16

y = 8

Video Solution:

Q2 Text Solution:

x + y = 7

3x - 2y = 11

From Eq x + y =7

y = (7-x)

Substituting y = (7-x) in eq. 3x - 2y = 11

3x - 2 (7-x) = 11

3x - 14 + 2x = 11

5x = 11 + 14

5x = 25

x = 5

Substituting x = 5 in eq x + y = 7

5 + y = 7

y = 7- 5

y = 2

x = 5 and y = 2

Video Solution:

Q3 Text Solution:

The two equations - 6x + 5y = 2 and -5x + 6y = 9

Eq.1 -6x + 5y = 2 multiplying eq.1 by 6

- 36x + 30y = 12 eq.3

Eq. 2 -5x + 6y = 9 multiplying eq.2 by 5

- 25x + 30y = 45 eq. 4

Subtracting eq.4 by eq.3,

-25x + 30y = 45

+36x - 30y = -12

11x = 33

x = 3

Substituting value of x = 3 in equation -6x + 5y = 2

-18 + 5y = 2

5y = 20

y = 4

Video Solution:

Q4 Text Solution:

The two equations 4x + 3y = -2 and 3x + 6 = 0

Solving equation 3x + 6 = 0 to get the value of x,

3x + 6 = 0

3x = -6

x = -2

Substituting value of x = -2 in the equation 4x +3y = -2

4 (-2) + 3y = -2

-8 + 3y = -2

3y = 8 - 2

3y = 6

y = 2

Video Solution:

Q5 **Text Solution:**

Betty's present age is unknown. Hence, let it be **b.**

Now 10 years later, her age (b+10) will be twice of her present age (b).

b + 10 = 2b

2b - b = 10

b = 10

Video Solution:

Q6 **Text Solution:**

Equation = x^2+ 5x + 6 = 0

Split +5 into two terms whose product is equal to +6

Two terms will be +2 and +3

x^2+ 3x+ 2x + 6=0

x(x+2) + 3(x+2) = 0

(x+2) (x+3) = 0

x+2 = 0 or x+3 = 0

x = -2 or x = -3

Video Solution:

Q7 **Text Solution:**

Equation - x^2 + 5x - 6 = 0

Split +5 into two terms whose product is equal to -6

Two terms will be +6 and -1

x^2+ 6x - x - 6 = 0

x (x+6) -1 (x+6) = 0

(x+6) (x-1) = 0

x = 1 or x = -6

Video Solution:

Q8 **Text Solution:**

Equation - 2x^2 + 7x + 6 = 0

Split +7 into two terms whose product is equal to (- 2 x 6) = -12

Two terms will be 4 and 3

2x^2 + 4x + 3x + 6 = 0

2x (x + 2) + 3 (x + 2) = 0

(x + 2) (2 x+ 3) = 0

x = -2 or – $\frac{3}{2}$

Video Solution:

Q9 **Text Solution:**

Equation - $x^2 - 10x + 24 = 0$

Split -10 into two terms whose product is equal to +24

Two terms will be -6 and -4

$x^2 - 6x - 4x + 24 = 0$

$x(x - 6) - 4(x - 6) = 0$

$(x - 4)(x - 6) = 0$

$x = 4$ or $x = 6$

Video Solution:

Q10 **Text Solution:**

Equation $9x^2 - 3x - 2 = 0$

Split +3 into two terms whose product is equal to $9 \times (-2) = -18$

Two terms will be -6 and -3

$9x^2 - 6x - 3x + 2 = 0$

$3x(3x - 2) - x(3x - 2)$

$(3x - 2)(3x - x) = 0$

$x = \frac{2}{3}$ or $x = \frac{1}{3}$

Video Solution:

Q11 **Text Solution:**

Equation- $5x^2 + 6x + 1 = 0$

Split +6 into two terms whose product is equal to $(5 \times 1) = 6$

Two terms will be +5 and +1

$5x^2 + 5x + x + 1 = 0$

$5x(x + 1) + 1(x + 1) = 0$

$(5x + 1)(x + 1) = 0$

$x = -\frac{1}{5}$ or $x = -1$

Video Solution:

Q12 **Text Solution:**

Equation- $38x^2 - 3x - 11 = 0$

Split -3 into two terms whose product is equal to $38 \times (-11) = 19 \times 2 \times 11 = -22$ and 19

Two terms will be -22 and +19

$38x^2 - 22x + 19x - 11 = 0$

$2x(19x - 11) + 1(19x - 11) = 0$

$(2x + 1)(19x - 11) = 0$

$x = -\frac{1}{2}$ or $x = \frac{11}{19}$

Video Solution:

Q13 **Text Solution:**

Equation- $24x^2 + 11x + 1 = 0$

Split +11 into two terms whose product is equal to $24 \times 1 = 8 \times 3$

Two terms will be +8 and +3

$24x^2 + 8x + 3x + 1 = 0$

$8x(3x + 1) + 1(3x + 1) = 0$

$(8x + 1)(3x + 1) = 0$

$x = -\frac{1}{8}$ or $x = -\frac{1}{3}$

Video Solution:

Q14 **Text Solution:**

Equation- $2x^2 + 19x + 44 = 0$

Split +19 into two terms whose product is equal to $44 \times 2 = 22 \times 4 = 11 \times 8$

Two terms will be +11 and +8

$2x^2 + 11x + 8x + 44 = 0$

$x(2x + 11) + 4(2x + 11) = 0$

$(x + 4)(2x + 11) = 0$

$x = -4$ or $x = -\frac{11}{2}$

Video Solution:

Q15 **Text Solution:**

Equation- $x^2 - 6x = 7$

Move 7 to LHS to make it a quadratic equation

$x^2 - 6x - 7 = 0$

Split -6 into two terms whose product is equal to $(-7) \times 1$

Two terms will be -7 and 1

$x^2 - 7x + x - 7 = 0$

$x(x - 7) + 1(x - 7) = 0$

$(x + 1)(x - 7) = 0$

$x = -1$ or $x = 7$

Video Solution: