

$$8. (101)^2 - (99)^2 = (101 - 99) \cdot (101 + 99) \\ = 2 \cdot 200 = 400$$

Cevap: A

$$9. 2a^2 - 5a - 3 = (2a + 1)(a - 3)'dir.$$

$$\begin{array}{ccc} 2a & \longrightarrow & +1 \\ & \searrow & \nearrow \\ a & \longrightarrow & -3 \end{array}$$

$$4a^2 - 1 = (2a)^2 - 1^2 = (2a - 1)(2a + 1)$$

$$\Rightarrow \frac{2a^2 - 5a - 3}{4a^2 - 1} : \frac{a - 3}{a - 1} =$$

$$\Rightarrow \frac{(2a+1)(a-3)}{(2a-1)(2a+1)} \cdot \frac{a-1}{a-3} = \frac{a-1}{2a-1}$$

Cevap: B

$$10. 3x^2 + mx - 2 \text{ ifadesinde } 3x - 1 \text{ çarpanı vardır.}$$

$$3x^2 + mx - 2 = (3x - 1)(x + 2)$$

$$\begin{array}{ccc} 3x & \longrightarrow & -1 \\ & \searrow & \nearrow \\ x & \longrightarrow & +2 \end{array}$$

$$m = 3 \cdot (+2) + 1 \cdot (-1) \\ = 6 - 1 = 5$$

Cevap: D

$$11. \underline{x} y - \underline{x} z = x(y - z)$$

Cevap: B

$$12. \textcircled{3x}(1 + 2x) = 3x \cdot 1 + 3x(2x) \\ = 3x + 6x^2$$

Cevap: C

$$13. \sqrt{\left(\frac{5}{8}\right)^2 + \left(\frac{1}{3}\right)^2 - \left(\frac{5}{8}\right)^2 \cdot \left(\frac{1}{3}\right)^2} \cdot 2 =$$

Karekökün içindeki ifade tam karedir.

$$= \sqrt{\left(\frac{5}{8} - \frac{1}{3}\right)^2} = \frac{5}{8} - \frac{1}{3} = \frac{7}{24}$$

Cevap: D

$$14. \frac{(a-b)(a+b)}{a-b} : \frac{(a-b)(a+b)}{a(a-b)} =$$

$$\frac{ab(a-b)(a+b)}{a-b} \cdot \frac{a(a-b)}{(a-b)(a+b)}$$

$$= a^2b$$

Cevap: D

$$15. \frac{(x+y)^2 + 2}{x^2 + y^2} = \frac{4^2 + 2}{12} = \frac{3}{2}$$

$$\begin{array}{l} x + y = 4 \Rightarrow (x + y)^2 = 4^2 \\ x^2 + 2xy + y^2 = 4^2 \\ \Rightarrow x^2 + y^2 = 12 \text{ dir.} \end{array}$$

Cevap: B

$$16. (x + 2)^2 = x^2 + 4x + 4$$

Cevap: D

$$\begin{aligned}
 17. & (x + y - 2)^2 - (x + y - 2) \\
 &= (x + y - 2)(x + y - 2 - 1) \\
 &= (x + y - 2)(x + y - 3)
 \end{aligned}$$

Cevap: D

$$\begin{aligned}
 18. & \frac{a^2(2a-1) - (2a-1)}{2a-1} : \left(\frac{a^2-1}{a} \right) \\
 &= \frac{(2a-1) \cdot (a^2-1)}{2a-1} \cdot \frac{a}{a^2-1} = a
 \end{aligned}$$

Cevap: C

$$\begin{aligned}
 19. & \frac{x^2 + x + 1}{x + 1} : \frac{(x-1)(x^2 + x + 1)}{2x + 1} \\
 &= \frac{x^2 + x + 1}{x + 1} \cdot \frac{2x + 1}{(x-1)(x^2 + x + 1)} \\
 &= \frac{1}{x-1}
 \end{aligned}$$

Cevap: A

$$\begin{aligned}
 20. & \frac{(x-2)(x^2 + 2x + 4)}{x^2 + 2x + 4} \cdot \frac{3(x+2)}{(x-2)(x+2)} \\
 &= 3
 \end{aligned}$$

Cevap: D