

$$1. \quad \frac{\frac{1}{3} - \frac{3}{5} + \frac{1}{5} - \frac{2}{3}}{\frac{2}{3} + \frac{4}{5}} = \frac{\frac{5-9+3-10}{15}}{\frac{10+12}{15}}$$

$$= -\frac{11}{15} \cdot \frac{15}{22}$$

$$= -\frac{11}{22}$$

$$= \boxed{-\frac{1}{2}}$$

Cevap: A

$$2. \quad \frac{(3^2)^3 - 5^4}{3^4 - 2^4} = \frac{(3^3)^2 - (5^2)^2}{(3^2)^2 - (2^2)^2}$$

$$\Rightarrow \frac{(27-25) \cdot (27+25)}{(9-4) \cdot (9+4)} = \frac{2 \cdot 52}{5 \cdot 13}$$

$$= \frac{8}{5}$$

Cevap: D

$$3. \quad \frac{5 + \sqrt{5} + 4\sqrt{5}}{5 + 5\sqrt{5}} = \frac{\cancel{5} + 5\sqrt{5}}{\cancel{5} + 5\sqrt{5}}$$

$$= \boxed{1}$$

Cevap: D

$$4. \quad \frac{6 \cdot (7! \cdot 8 - 7!)}{7 \cdot (6! \cdot 7 - 6!)} = \frac{6 \cdot 7! \cdot (8-1)}{7 \cdot 6! \cdot (7-1)} = \frac{6 \cdot 7! \cdot 7}{7 \cdot 6! \cdot 6}$$

$$= \frac{7 \cdot \cancel{6!}}{\cancel{6!}}$$

$$= 7$$

Cevap: A

$$5. \quad 100A + 10B + 9 - 10A - B = 100A + 10A + 3$$

$$9B + 6 = 20A$$

$$\begin{array}{ccc} \downarrow & & \downarrow \\ 6 & & 3 \\ 3 + 6 = \boxed{9} \end{array}$$

Cevap: D

$$6. \quad x^3 \cdot y^6 \cdot z > 0$$

$$x^3 \cdot z > 0$$

$$x \cdot z > 0$$

$y^6 > 0$ derecesi çift olduğu için
 $y > 0$ ve $y < 0$ olabilir.

Cevap: C

$$7. \quad \begin{array}{l} a = 2 \\ b = 3 \\ c = 1 \end{array} \quad 2 - 3 - 1 = -2$$

Cevap: B

$$8. \quad \begin{array}{l} \cdot \frac{A}{C} = 3 \quad A = 3C \\ \cdot \frac{B}{D} = 2 \quad B = 2D \end{array} \quad \begin{array}{r} 9AD^4 \\ + 3CB^8 \\ \hline 132 \end{array}$$

$$\begin{array}{r} 94 \\ - 38 \\ \hline 56 \end{array}$$

Cevap: D

9. $x = -y$ x ve y zıt işaretli
 $x \cdot y \cdot z < 0$

$$x \cdot y > 0$$

$$z > 0$$

$$\frac{x \cdot z}{x} < \frac{x \cdot y}{x}$$

$$\boxed{z > y > x}$$

$$x \cdot z - x \cdot y < 0$$

$$\boxed{x \cdot z} < \boxed{x \cdot y}$$

$$x \cdot z = -$$

$$- +$$

$$x \cdot y = -$$

$$- +$$

Cevap: C

10. $a + b = 19$ 1, 2, 3, 4, ... 15
 $a \cdot b = c \cdot d$ $a + b = 19$

$$4 \cdot 15$$

$$6 \cdot 10 \Rightarrow 35$$

$$5 \cdot 14$$

$$7 \cdot 10 \Rightarrow 36$$

$$7 \cdot 12$$

$$6 \cdot 14 \Rightarrow 39$$

$$9 \cdot 10$$

$$15 \cdot 6 \Rightarrow 40$$

4 tane

Cevap: D

11. $\frac{3^x \cdot 3^3 - 3^x \cdot 3^2}{9^x \cdot 9^4} = 54$

$$\frac{3^x \cdot (27 - 9) \cdot 3^3 \cdot 2}{3^x \cdot 3^x \cdot 9^4} \times \frac{1}{1}$$

$$3^2 = 3^8 \cdot 3^3 \cdot 3^x$$

$$3^2 = 3^{11+x} \Rightarrow 11 + x = 2$$

$$\boxed{x = -9}$$

Cevap: C

12. $\boxed{14} : \boxed{2} = \boxed{9} + \boxed{6} - \boxed{8}$

2, 3, 6, 8, 9 ve 14

Cevap: E

13. $\sqrt{\frac{2a-1}{a^2}} \cdot \frac{a}{\sqrt{2a+1}} = \frac{1}{2}$

$$\frac{2a-1}{2a+1} = \frac{1}{4}$$

$$\frac{\sqrt{2a-1}}{a} \cdot \frac{a}{\sqrt{2a+1}} \times \frac{1}{2}$$

$$(2 \cdot \sqrt{2a-1} = \sqrt{2a+1})$$

$$4 \cdot (2a-1) = 2a+1$$

$$8a-4 = 2a+1$$

$$6a = 5$$

$$\boxed{a = \frac{5}{6}}$$

Cevap: E

14. $\frac{8+5}{m} = \frac{13}{m} \rightarrow 1, 13$

$$\frac{8+5+m}{n} = \frac{13+m}{n} \Rightarrow \frac{14}{n}$$

$$\downarrow$$

1, 2, 7, 14

$$\frac{13+13}{n} = \frac{26}{n}$$

$$\downarrow$$

1, 2, 13, 26

$$1, 2, 7, 14, 13, 26$$

6 tane değer alır.

Cevap: D

15. $3^2 \cdot k \Rightarrow$ bölenleri

$$1, 3, 9, k, 3k, 9k$$

$$13 + 13k = 14k$$

$$\curvearrowright$$

$$\boxed{13 = k}$$

Cevap: D