Matematik Defteri
Çarpanlara Ayırma – Test 1 –

1.Soru: $\dfrac{2a\cdot(b-c)^{-1}}{(c-b)}$

$= -2a$

Cevap: A

2.Soru: $a\cdot(bx+by-b)-b\cdot(ax+ay+a)$

$= abx+aby-ab-abx-aby-ab$

$= -2ab$

Cevap: A

3.Soru: $2a-ab+2-a^2b$

$a(2-ab)-ab+2$

$a\cdot(2-ab)+(2-ab)$ (2-ab parantezine alalım.)

$(2-ab)\cdot(a+1)$

Cevap: C

4.Soru: $xy+y^2-yz-xz$

$= y(x+y)-z(y+x)$

$= (x+y)(y-z)$

Cevap: C

5.Soru: $\dfrac{x^3y-xy^3}{x^2y+xy^2}$

$= \dfrac{xy(x^2-y^2)}{xy(x+y)}$

$= \dfrac{(x-y)\cdot(x+y)}{(x+y)}$

$= x-y$

Cevap: E

6.Soru: $x^2-bx-b-1$

$(x^2-1)-b(x+1)$

$(x-1)\cdot(x+1)-b(x+1)$ (x+1 ortak çarpan parantezine alalım.)

$(x+1)\cdot(x-1-b)$

$(x+1) \rightarrow$ 1. çarpan

$(x-1-b) \rightarrow$ 2. çarpan

Cevap: A

7.Soru: $\dfrac{x^3+x^2+x+1}{x^2+1}$

$= \dfrac{x^2(x+1)+(x+1)}{x^2+1} \Rightarrow$ (x+1 parantezine alalım)

$= \dfrac{(x+1)(x^2+1)}{(x^2+1)}$

$= (x+1)$

Cevap: C

8.Soru: $x\cdot y-(x+1)\cdot(y-1)$ (Parantezi dağıtalım)

$x\cdot y-(xy-x+y-1)$ (-)'yi dağıtalım

$= xy-xy+x-y+1$

$= x-y+1 \quad (x=2008, y=2005)$

$= 2008-2005+1$

$= 3+1$

$= 4$

Cevap: B

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9. Soru: $m+n=6 \quad x+y=3$

$mx+ny+nx+my$

$x(m+n)+y(m+n)$ ($(m+n)$ parantezine alalım)

$=(m+n)(x+y)$

$=6 \cdot 3 = 18$

Cevap: C

10. Soru: $x+y=7 \quad x-z=3$

$x^2+xy-xz-yz$

$=x(x+y)-z(x+y)$ ($(x+y)$ parantezine alalım)

$=(x+y)(x-z)$

$=7 \cdot 3$

$=21$

Cevap: D

11. Soru: $x+y=4 \quad x-z=1.$

$x^2+xy-xz-yz$

$=x(x+y)-z(x+y)$

$=(x+y)(x-z)$

$=4 \cdot 1$

$=4$

Cevap: B

12. Soru: $\dfrac{x-3}{(x-2).3-x}$

$=\dfrac{x-3}{3x-6-x}$

$=\dfrac{x-3}{2x-6}$

$=\dfrac{x-3}{2(x-3)}=\dfrac{1}{2}$

Cevap: A

13. Soru:

$$\frac{x\cdot(x-y)}{y\cdot(y+z)} : \frac{y(x-y)}{x(y+z)}$$

$$=\frac{x\cdot(x-y)}{y\cdot(y+z)} \cdot \frac{x\cdot(y+z)}{y\cdot(x-y)}$$

$$=\frac{x^2}{y^2}$$

Cevap: B

14. Soru:

$$\frac{xy-yz-xt+zt}{x^2-xz+xt-zt}$$

$$=\frac{y(x-z)-t(x-z)}{x(x-z)+t(x-z)}$$

$$=\frac{(x-z)\cdot(y-t)}{(x-z)(x+t)}$$

$$=\frac{y-t}{x+t}$$

Cevap: A

15. Soru: $x^3+x^2+(x+1)$

$=x^2(x+1)+(x+1)$

$=(x+1)(x^2+1)$

Cevap: C

16. Soru: $(2-x)(1-y)+xy-x(y-1)-y(x-2)$

$=(1-y)(2-x+x)-y(-x+x-2)$

$=(1-y)\cdot 2-y\cdot(-2)$

$=2\cdot(1-y+y)$

$=2 \cdot 1$

$=2$

Cevap: B