

حلول تمارين درس العمليات على الأعداد الطبيعية والأعداد العشرية -5-

(8) اصطلاحات للكتابة:

حل التمرين 1:

$b \times a = ba = ab$	$5 \times (x + x + x) = 5 \times (3x) = 15x$
$x \times 10 \times a = 10ax$	$3 \times x \times 12 \times z = 3 \times 12 \times x \times z = 36xz$
$4 \times b \times 6 = 4 \times 6 \times b = 24b$	$y \times 2 + 7 \times b = 2y + 7b$
$z \times 4 - 6 \times c = 4z - 6c$	$9 + 8 \times b = 9 + 8b$
$(3,7 \times y - 1,5 \times z + 0,4 \times 3,5) \times 9 = 9(3,7y - 1,5z + 1,4)$	

حل التمرين 2:

$(3,5 + 5) \times a + (5,1 - 1) \times b = (3,5 + 5)a + (5,1 - 1)b = 8,5a + 4,1b$	
$(4,5 + 6) \times a = (4,5 + 6)a$	$a \times 5 \times b = 5ab$
$(4,5 - 3) \times a + (1,5 - 1) = (4,5 - 3)a + 0,5 = 1,5a + 0,5$	
$10 \times a \times 2 \times b = 10 \times 2 \times a \times b = 20ab$	$2 \times a \times 4 = 8a$
$(4,5 - x) \times (10 + x) = (4,5 - x)(10 + x)$	
$(1,6 - 0,2x) \times (10 + x) \times x = (1,6 - 0,2x)(10 + x)x$	

حل التمرين 3:

$42 \times b + 91$	$18 \times z + 61$	$8 \times c + 69 \times x - 59$
$c \times y + 26 - 49 \times b$	$11 \times b \times c + a \times z$	$61 \times (y + 75)$
$13 \times (62 - 5 \times b)$	$78 \times (50 \times z + a \times y - 66)$	
$(25 \times y + 35) \times (y - 12)$	$(39 \times b - 1) \times (51 + 50 \times b)$	

حل التمرين 4:

$10,7 \times (3 + 4,9 \times x)$	$89 \times x \times (32,1 \times a - 41)$
$28 \times (7 \times a + 3)$	$7,2 \times (41 \times x - 12)$
$12 \times x + 31 \times y$	$7 \times (2 \times x - 41)$
$3 \times x - 9 \times y$	$5 \times a \times (3 \times x - 2)$

9) نشر عبارة جبرية:حل التمرين 1:

$$5(a + 4) = 5 \times a + 5 \times 4 = 5a + 20$$

$$7(3y + 4) = 21y + 28$$

$$a(b + 2c) = a \times b + a \times 2c = ab + 2ac$$

حل التمرين 2:

$8(a + 3)$	$8a + 24$
$5(x - 9)$	$5x - 45$
$2k(a + 9)$	$2ka + 18k$
$\pi(4 + R)$	$4\pi + \pi R$
$3(6x - y)$	$18x - 3y$

حل التمرين 3:

$$3(5,6 + 2x) = 3 \times 5,6 + 3 \times 2x = 16,8 + 6x$$

$$2 + 6(3,4 + 5x) = 2 + 6 \times 3,4 + 6 \times 5x = 2 + 20,4 + 30x = 22,4 + 30x$$

$$10(7x + 10) = 10 \times 7x + 10 \times 10 = 70x + 100$$

$$30 - 3,5(6 + 2x) = 30 - 3,5 \times 6 - 3,5 \times 2x = 30 - 21 - 7x = 9 - 7x$$

حل التمرين 4:

$$5(4x + 6) = 5 \times 4x + 5 \times 6 = 20x + 30$$

$$2(9 + 15x) = 2 \times 9 + 2 \times 15x = 18 + 30x$$

$$4(3x + 2) = 4 \times 3x + 4 \times 2 = 12x + 8$$

$$2,5(15x + 1) = 2,5 \times 15x + 2,5 \times 1 = 37,5x + 2,5$$

حل التمرين 5:

$2(x + 5) = 2x + 2 \times 5 = 2x + 10$	$5(3x - 4y) = 5 \times 3x - 5 \times 4y = 15x - 20y$
$b(2a + c - 1) = 2ab + bc - b$	$3(x - 6) = 3 \times x - 3 \times 6 = 3x - 18$
$6(5 + c) = 6 \times 5 + 6 \times c = 30 + 6c$	$(3 + b)4 = 3 \times 4 + 4b = 12 + 4b$
$2(y + 3) = 2y + 2 \times 3 = 2y + 6$	$5(x - 3) = 5 \times x - 5 \times 3 = 5x - 15$

## حل التمرين 6:

$$6(4+7x) = 6 \times 4 + 6 \times 7x = 24 + 42x$$

$$8(3x-2y) = 8 \times 3x - 8 \times 2y = 24x - 16y$$

$$7(9x-3y) = 7 \times 9x - 7 \times 3y = 63x - 21y$$

$$2(2x+9y-6) = 2 \times 2x + 2 \times 9y - 2 \times 6 = 4x + 18y - 12$$

$$3(5x+7y-7) = 3 \times 5x + 3 \times 7y - 3 \times 7 = 15x + 21y - 21$$

$$9(9x+3y-3) = 9 \times 9x + 9 \times 3y - 9 \times 3 = 81x + 27y - 27$$

## حل التمرين 7:

$$3(2+7a) - 5a = 3 \times 2 + 3 \times 7a - 5a = 6 + 21a - 5a = 6 + 16a$$

$$5(2x+1) + 7(3x+4) = 5 \times 2x + 5 \times 1 + 7 \times 3x + 7 \times 4 = 10x + 5 + 21x + 28$$

$$= (10+21)x + (5+28) = 31x + 33$$

$$2(5+x) - 7(x+1) = 2 \times 5 + 2 \times x - 7 \times x - 7 \times 1 = 10 + 2x - 7x - 7$$

$$= (10-7) + (2-7)x = 3 - 5x$$

$$4(3c-6d+1) + 5(2c+d-2) = 12c - 24d + 4 + 10c + 5d - 10$$

$$= (12+10)c + (5-24)d + (4-10)$$

$$= 22c - 19d - 6$$

$$3(8+x) + 6x + 2(4-x) = 24 + 3x + 6x + 8 - 2x = (24+8) + (3+6-2)x$$

$$= 32 + 7x$$

# Latreche MIFA