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| **C:\Users\Emilien\Desktop\Bazar\Logo Actumaths\pi_final.png** | **Exercices** | **Calcul avec les nombres relatifs** |

**Exercice 1 : une opération**

Effectuez les calculs suivants :

A = (‑5) × (+11) B = (‑14) – (+14)

C = (‑33) : (+11) D = (-3) – (-11)

E = (‑3) × (‑11) F = (‑12) × (+4)

G = (‑12) : (+4) H = (-5) – (-2)

I = (+14) + (-2) J = (+3) : (+12)

K = (‑5) × (‑2) L = (+42) – (‑2)

M = (‑5) + (‑11) N = (‑12) + (+4)

O = (‑12) + (‑14) P = (+12) + (‑12)

Q = (+14) – (‑2) R = (-­24) : (‑12)

S = (‑15) + (‑12) T = (‑2) × (+4)

U = (+4) – (+11) V = (‑22) : (+11)

W = (+13) × (‑4) X = (‑10) + (+10)

Y = (‑4) + (+14) Z = (+14) + (+12)

AA = (+15) – (+12) AB = (‑12) : (+4)

AC = (‑2) × (‑13) AD = (+4) : (‑2)

AE = (‑13) + (‑11) AF = (‑1) + (+2)

AG = (-11,2) – (‑5,3) AH = (-5,2) – (‑14,4)

AI = (+l1) × (+5) AJ = (‑13) : (+1)

AK = (‑41) + (‑12) AL = (‑3) + (+4)

AM = (‑5) – (+3) AN = (+15) – (+42)

AO = (-16,5) : (+5,5) AP = (+4) – (‑2)

AQ = (-5) × (+3) AR = (+3,5) + (‑12,2)

AS = (-11,5) – (+2,5) AT = (‑5) – (+12)

AU = (-4,2) + (‑14) AV = (+4,5) + (‑3,2)

AW = (-2) – (‑4) AX = (‑4) : (‑2)

AY = (‑14,5) + (-1,3) AZ = (-4) × (+2,2)

BA = (+42) – (‑12)

**Exercice 2**

Sans effectuer les calculs, indiquez quelles expressions numériques sont égales :

A = ‑7 + 11 – 4 B = 11 – 7 + 4 C = 11 – 7 – 4

D = ‑7 – 4 + 11 E = 4 – 7 + 11

Sans effectuer les calculs, indiquez quelles expressions algébriques sont égales :

F = *x – y + z* G = *y – x – z* H = *-z + y – x*

I = *-z – x + y* J = *z + x – y* K = *-x + y – z*

**Exercice 3 : plusieurs opérations**

Effectuez les calculs suivants :

BB = 2 – 4 × 5 BC = ‑2 × 4 – 5

BD = ‑2 × 2 + 4 BE = 12 – 14 – 2

BF = 2 – 12 – 4 BG = 14 –12 × 2

BH = 14 – 15 – 5 – 14 – 5

BI = 12 – 14 + 15 – 14 BJ = ‑5 + 14 – 12 –15

BK = -15 – 14 + 15 – 12

BL = 14 – 2 × 3 BM = 2 – 12 + 5 – 14 – 10

BN = 2 – 4 + 5 – 14 BO = ‑5 + 2 – 2 × 15

BP = ‑12 – 5 – 4 × 5 – 12

BQ = -5 + 2 – 3 + 5 – 2 + 3

BR = -1 – 2 – 3 – 4 – 5 – 6

BS = 1 – 2 × 3 – 4 + 5 – 6

BT = 4 – (‑2) × (‑4) : (+4) – (‑2)

BU = 2 – 4 × (+5) + (‑12)

BV = (-2) – (+11) – (‑11)

BW = (-2) × (-2) × (+4) + (‑4) × (+12)

BY = (-45) + (-3) + (+14) + (‑5) + (+12)

BZ = (+15) + (‑2) + (‑15) + (+11)

CA = (‑5) + (+4) × (+2) + (‑4) : (-1)

CB = (-3) + (+11) + (+3) + (-2)

CC = (+5) × (‑2) + (‑5) × (+4) × (‑5)

CD = (-5,2) + (-3,4) + (+4,5) + (-4,2)

CE = (-4,5) + (-5,3) + (‑4,5) + (-2,5)

CF = 14 + (‑5,2) + (‑4,5) + (+5,3) + (-1,5)

CG = (+4) : (‑2) × (‑11) + (+42) + (‑12)

CH = (-15) + (‑31) – (+14) + (‑45) – (+42)

CI = (+5) – (‑2) × (‑2) × (+2) + (‑5) × (+4)

CJ = (‑2) – (‑2) : (+2) + (‑4) + (+2)

CK = (‑15) – (‑3) × (+4) – (‑15) + (+12)

CL = (+12) : (+4) – (‑15) + (‑4) + (+11)

CM = (-4,2) – (‑5,4) + (+10,5) – (-4,2)

CN = (-4,5) – (+5,3) + (‑14,2) + (-3,5)

CO = (-2) × (+4) × (‑5) – (+11)

CP = (+3) – (‑5) × (‑5) – (+4)

CQ = (‑4) : (‑1) – (+3) × (‑5)

CR = (‑5) – (+11) – (+5) – (‑4)

**Exercice 1 (correction)**

A = -5×11 = -55 B = -14 – 14 = -28

C = -33:11 = -3 D = -3 + 11 = 8

E = 3×11 = 33 F = -12×4 = -48

G = -12:4 = -3 H = -5 + 2 = -3

I = 14 – 2 = 12 J = 3:12 = 0,25

K = 5×2 = 10 L = 42 + 2 = 44

M = -5 – 11 = -16 N = -12 + 4 = -8

O = -12 – 14 = -26 P = 12 – 12 = 0

Q = 14 + 2 = 16 R = 24:12 = 2

S = -15 – 12 = -27 T = -2×4 = -8

U = 4 – 11 = -7 V = -22:11 = -2

W = -13×4 = -52 X = -10 + 10 = 0

Y = -4 + 14 = 10 Z = 14 + 12 = 26

AA = 15 – 12 = 3 AB = -12:4 = -3

AC = 2×13 = 26 AD = -4:2 = -2

AE = -13 – 11 = -24 AF = -1 + 2 = 1

AG = -11,2 + 5,3 = -5,9 AH = -5,2 + 14,4 = 9,2

AI = 11×5 = 55 AJ = -13:1 = -13

AK = -41 – 12 = -53 AL = -3 + 4 = 1

AM = -5 – 3 = -8 AN = 15 – 42 = -27

AO = -16,5:5,5 = -3 AP = 4 + 2 = 6

AQ = -5×3 = -15 AR = 3,5 – 12,2 = -8,7

AS = -11,5 – 2,5 =-14 AT = -5 – 12 = -17

AU = -4,2 – 14 = -18,2 AV = 4,5 – 3,2 = 1,3

AW = -2 + 4 = 2 AX = 4:2 = 2

AY = -14,5 – 1,3 = -15,8 AZ = -4\*2,2 = -8,8

BA = 42 + 12 = 54

**Exercice 2 (correction)**

A = C = D ; B = E

G = H = I = K ; F = J

**Exercice 3 (correction)**

BB = -18 BC = -13

BD = 0 BE = -4

BF = -14 BG = -10

BH = -25 BI = -1

BJ = -18 BK = -26

BL = 8 BM = -29

BN = -11 BO = -33

BP = -49 BQ = 0

BR = -21 BS = -10

BT = 4 – 2 × 4 : 4 + 2 = 4

BU = 2 – 4 × 5 – 12 = -30

BV = -2 – 11 + 11 = -2

BW = 2 × 2 × 4 – 4 × 12 = -32

BY = -45 – 3 + 14 – 5 +12 = -27

BZ = 15 – 2 – 15 + 11 = 9

CA = ‑5 + 4 × 2 + 4 : 1 = 7

CB = -3 + 11 + 3 – 2 = 9

CC = -5 × 2 + 5 × 4 × 5 = 90

CD = -5,2 – 3,4 + 4,5 – 4,2 = -8,3

CE = -4,5 – 5,3 – 4,5 – 2,5 = -16,8

CF = 14 – 5,2 – 4,5 +5,3 – 1,5 = 8,1

CG = 4 : 2 × 11 + 42 – 12 = 52

CH = -15 – 31 – 14 – 45 – 42 = -147

CI = 5 – 2 × 2 × 2 – 5 × 4 = 23

CJ = ‑2 + 2 : 2 – 4 + 2 = -3

CK = ‑15 + 3 × 4 + 15 + 12 = 24

CL = 12 : 4 + 15 – 4 + 11 = 25

CM = -4,2 + 5,4 + 10,5 + 4,2 = 15,9

CN = -4,5 – 5,3 – 14,2 – 3,5 = -27,5

CO = 2 × 4 × 5 – 11 = 29

CP = 3 – 5 × 5 – 4 = -26

CQ = 4 : 1 + 3 × 5 = 19

CR = ‑5 – 11 – 5 +4 = -17