

# تمارين (الجمع و الطرح في $\mathbb{Z}$ )



تمرين عدد 1

احسب ما يلي :

$$510 + (-401) : 256 + (-140) : (-14) + (-14) : (-213) + 200$$

$$(-24) + 17 + (-36) + 43 : 17 + (-21) + 4 : (-50) + (-14) + (-6) : (-12) + (-18) + 12$$

$$21 - (-41) + (-30) - (-70) : (-7) + 25 - (-8) + (-12) - 5 : (-20) - (-30) + 20 + (-30)$$

$$* (-50) + (-14) + (-6)$$

$$= (-50) + (-20)$$

$$= -70$$

$$* 21 - (-41) + (-30) - (-70)$$

$$= 21 + 41 + (-30) + 70$$

$$= 21 + 41 + 70 + (-30)$$

$$= 132 + (-30)$$

$$= 102$$

$$* (-7) + 25 - (-8) + (-12) - 5$$

$$= -7 + 25 + 8 + (-12) + (-5)$$

$$= (-7) + (-12) + (-5) + 25 + 8$$

$$= -24 + 33$$

$$= 9$$

$$* 510 + (-401) = 109$$

$$* 256 + (-140) = 116$$

$$* (-14) + (-14) = -28$$

$$* (-213) + 200 = -13$$

$$* (-24) + 17 + (-36) + 43$$

$$= (-24) + (-36) + 17 + 43$$

$$= -60 + 60$$

$$= 0$$

$$* 17 + (-21) + 4$$

$$= 17 + 4 + (-21)$$

$$= 21 + (-21) = 0$$

$$* (-20) - (-30) + 20 + (-30)$$

$$= (-20) + 30 + 20 + (-30)$$

$$= (-20) + 20 + 30 + (-30)$$

$$= 0 + 0$$

$$= 0$$





$$\begin{aligned}
 & * (-7) + 14 + (-3) + (-2) \\
 & = (-7) + (-3) + (-2) + 14 \\
 & = -12 + 14 \\
 & = +2
 \end{aligned}$$

$$\begin{aligned}
 a & = -3 & b & = -7 \\
 a - b & = (-3) - (-7) \\
 & = -3 + 7 \\
 & = +4
 \end{aligned}$$

$$\begin{aligned}
 * (-3) \times (+7) & = -21 \\
 * (-5) \times (-4) & = +20 \\
 * 5 \times 4 & = 20
 \end{aligned}$$

+	×	+	=	+
-	×	-	=	+
-	×	+	=	-
+	×	-	=	-

$$\begin{aligned}
 * (-3) \times (-4) \times (-7) \times 25 \\
 = (-4) \times 25 \times (-3) \times (-7) \\
 = (-100) \times (21) \\
 = -2100
 \end{aligned}$$

$$\begin{aligned}
 \frac{-5}{-4} & = \frac{5}{4} \\
 \frac{5}{4} & = (-5) \times \left(\frac{-1}{4}\right) \\
 & = +\frac{5}{4}
 \end{aligned}$$

$$\begin{aligned}
 * (-2) \times (-3) \times (-1) \times (-4) \\
 \underbrace{(-2) \times (-3)}_{(+6)} \times \underbrace{(-1) \times (-4)}_{(+4)} \\
 \text{24}
 \end{aligned}$$

$$\begin{aligned}
 & = -3 + (-4) \\
 & = +4 + (-5)
 \end{aligned}$$

$$3 - \underbrace{(-2)}_{+} = 3 + 2$$

$$3 + (-2) = 3 - 2$$





أوجد العدد الصحيح النسبي  $x$  في كل حالة من الحالات التالية :

$$20+x = -36 \quad ; \quad x+(-12) = -2 \quad ; \quad (-12)+x = 6 \quad ; \quad x+17 = 4$$

$$(-226)+x = 24 \quad ; \quad 45-x = (-45) \quad ; \quad (-122)-x = (-108) \quad ; \quad (-35)+x = (-40)$$

$$(-16)+x+(-34) = (-50) \quad ; \quad x+223+(-24) = 0 \quad ; \quad (-5)+x+(-15) = 60 \quad ; \quad 525+x+(-25) = 100$$

$$* \quad 525 + x + (-25) = 100$$

$$* \quad 525 + (-25) + x = 100$$

$$500 + x - 500 = 100 - 500$$

$$x = 100 - 500$$

$$x = -400$$

$$* \quad 20 + x = -36$$

$$\cancel{20} + x - \cancel{20} = -36 - 20$$

$$= -36 + (-20)$$

$$x = -56$$

$$* \quad x + (-12) + 12 = 6 + 12$$

$$x = 18$$

$$* \quad (-12) + x + 12 = 6 + 12$$

$$x = 18$$

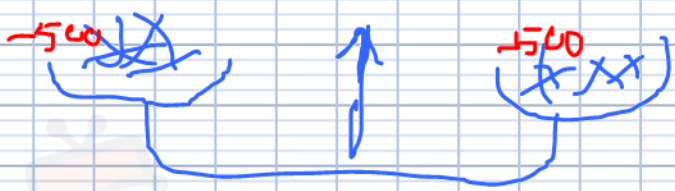




$$* (-3) - (|-1 - (-4) - (-5)| - (-(-5))) - (-|2 - (-4)|)$$

زکریا : 16  
 یوسف : 3  
 ایمان : 20  
 حسنین : 20

$$\begin{aligned}
 & * (-3) - (|-4 + 5| + (-5)) - (-|2 + 4|) \\
 & = (-3) - (-9 + (-5)) + 6 \\
 & = (-3) - (-14) + 6 \\
 & = -3 + 14 + 6 \\
 & = -3 + 20 \\
 & = 17
 \end{aligned}$$



$$\begin{aligned}
 30 + x &= -17 \\
 \cancel{30} + x - \cancel{30} &= -17 - 30 \\
 x &= -47
 \end{aligned}$$

$$\begin{aligned}
 x + (-12) &= (-7) - (-5) \\
 x + (-12) &= (-7) + 5 \\
 x + (-12) &= -2
 \end{aligned}$$

$$\begin{aligned}
 x + (-12) + 12 &= -2 + 12 \\
 x &= +10
 \end{aligned}$$





أزل الأقواس ثم اختصر العبارات التالية حيث  $a$  و  $b$  و  $c$  أعداد صحيحة نسبية.

$$A = (a+25) + (17-b) - (26+a) + (b-25)$$

$$B = 12 - (-a+10) - (a+25) + (40-a) - (-8-a)$$

$$C = (a+b-4) - [66 - (a-22) + (18-b)] - (50-a)$$

$$D = (a+b-c) - (c-b) + (-a-b+c)$$

$$E = a - (b+c) + c - (a-b-c)$$

$$F = (a+b+c) - (a-b+c) + (a-b-c) - (a+b-c)$$





أوجد العدد الصحيح النسبي  $x$  في كل حالة من الحالات التالية :

$$(-10) - (25 + x) = (-14) \quad : \quad (-26) - (-x - 30) = 8$$

$$60 + (-56 - x) = 4 \quad : \quad (-20) - (-15 - x) = 14$$

