



1. Reminders: additions

E.6088 Using mental arithmetic, give the results of the following operations :

- a) $(+0.6) + (+1.5)$ b) $(+0.8) + (-1.5)$
 c) $(-5.1) + (-0.7)$ d) $(-3.2) + (-0.5)$
 e) $(+1.4) + (-7)$ f) $(+2.2) + (+4.9)$

2. Reminders: sum of several terms

E.8670

Method: to perform the sum of several relative numbers, we calculate the sum of the positive numbers, calculate the sum of the negative numbers, then add these two sums.

Example: $A = (+2) + (+3) + (-5) + (+1) + (-2)$
 $= (+6) + (-7)$
 $= (-1)$

Perform the following calculations :

- a) $(+3) + (-5) + (+1) + (-1)$
 b) $(-2) + (-4) + (+6) + (-1) + (+7)$
 c) $(+7) + (-2) + (-4) + (+3)$
 d) $(-2) + (+1) + (+4) + (-3)$

E.8679 Perform the following calculations :

- a) $(-0.5) + (+2.7) + (+1.5) + (-1.7)$
 b) $(-4.1) + (+1.6) + (-3.7) + (+0.4)$
 c) $(-3.3) + (-1.2) + (+4.5) + (-1.2)$
 d) $(+2.5) + (+1.7) + (-7.1) + (+2.4)$

3. Reminders: addition and subtraction

E.8687 Perform the following calculations :

- a) $(+2) + (-5)$ b) $(-3) - (-4)$ c) $(-5) - (+2)$
 d) $(+2) - (-7)$ e) $(-6) + (-2)$ f) $(+7) - (+2)$

E.4342

Rule for subtracting relative numbers:

To subtract two relative numbers, add the first number to the opposite of the second number

Examples:

- o $(+3) - (+5) = (+3) + (-5) = -2$
- o $(-3) - (+5) = (-3) + (-5) = (-8)$

Perform the following calculations :

- a) $(+5) - (+3)$ b) $(-3) - (-3)$ c) $(-7) - (+13)$

E.1711 Perform the following calculations :

- a) $(-3) + (+7) + (+3)$ b) $(-7) + (-2) + (+4) + (-1)$
 c) $(+7) - (-2) + (+4)$ d) $(+5) + (-4) - (+7)$

Indication: calculations will be carried out with wording similar to the example opposite:

$$\begin{aligned} & (+7) - (-1) - (-5) + (+3) + (-4) \\ & = 7 + 1 + 5 + 3 - 4 \\ & = 16 - 4 \\ & = 12 \end{aligned}$$

E.8665 Perform the calculations below :

- a) $(-1.5) - (+2.7)$ b) $(-0.8) - (-1.2)$
 c) $(+0.8) - (-2.2)$ d) $(+1.7) - (+2.6)$

E.8686 Perform the calculations below :

- a) $(+2) + (-4) - (+8) + (+1) - (-7)$
 b) $(+7) - (-1) - (-5) + (+3) + (-4)$
 c) $(-5) + (+2) - (-4) - (+7) - (-1)$

E.8666 Perform the calculations below and give the result in simplified form :

- a) $\left(-\frac{2}{3}\right) + \left(-\frac{1}{3}\right)$ b) $\left(+\frac{4}{5}\right) + \left(+\frac{3}{5}\right)$ c) $\left(-\frac{3}{7}\right) - \left(+\frac{1}{14}\right)$
 d) $\left(+\frac{2}{3}\right) - \left(-\frac{1}{3}\right)$ e) $\left(-\frac{9}{4}\right) + \left(-\frac{5}{3}\right)$ f) $\left(+\frac{8}{3}\right) - \left(+\frac{5}{6}\right)$

4. Reminders: simplified entries

E.4343    Perform the following calculations:

- (a) $5 - 3 + 7 + 2 - 5 - 4$ (b) $-2 - 3 + 4 - 8 + 5$
 (c) $3 - 8 - 10 + 4 + 7$ (d) $11 - 24 + 12 - 11$

E.1712   

Rules: to simplify an expression containing additions and subtractions of relative numbers:

- Subtractions are turned into additions by changing the number following the subtraction into its opposite,
- Parentheses and “+” addition signs are not written in the simplified expression,
- If the first number of the operation is positive, we write not its sign “+” at the beginning of the expression

For each expression, four simplified forms are proposed, but only one is correct. Copy the correct simplified form and calculate the expression:

1 $(+2) - (+8) - (-4) + (-3)$:

(a) $2 - 8 - 4 - 3$ (b) $2 - 8 - 4 - 3$

(c) $2 + 8 + 4 + 3$ (d) $2 - 8 + 4 - 3$

2 $(-7) - (-3) + (+5) - (+4)$:

(a) $7 + 3 + 5 - 4$ (b) $-7 - 3 + 5 - 4$

(c) $-7 - 3 + 5 - 4$ (d) $-7 + 3 + 5 - 4$

E.8667    Perform the calculations below:

(a) $0.8 + 2.5 - 7.3 - 0.5$ (b) $-0.2 + 1.5 - 2.7 + 0.3$

(c) $-1.8 - 0.5 + 1.2$ (d) $5.4 - 5.9 + 5.5 - 5.3$

E.8668    Perform the calculations below and give the result in simplified form:

(a) $-\frac{1}{3} + \frac{5}{3} - \frac{4}{3} + \frac{2}{3}$ (b) $\frac{3}{4} + \frac{5}{2} - \frac{11}{8} - \frac{7}{4}$

(c) $-\frac{2}{3} - \frac{5}{4} + \frac{1}{6} + \frac{1}{3}$ (d) $\frac{5}{4} - \frac{1}{3} + \frac{1}{9} - \frac{11}{6}$

5. Reminders: sum and priority of operations

E.1175    Perform the following calculations:

- (a) $-2 - 3 + (-5 + 2)$ (b) $2 - (5 - 2 - 4) + 1$
 (c) $2 - 4 - 9 + 4 + 7$ (d) $(7 - 12) - (5 - 12 + 8)$

E.1713    Perform the following calculations:

- (a) $2 - 7 + 5 - 4 - 9$ (b) $2 + 3 - (5 - 9)$
 (c) $-2 + 9 - (3 + 7)$ (d) $(3 + 2) + [3 - (4 - 7)] - 2$

E.4385    Perform the following calculations:

- (a) $5 - 4 - 3 + 2 - 1$ (b) $15 - 3 + 5 - 7$
 (c) $15 - (3 - 8)$ (d) $-(5 + 3) + (8 - 13)$

E.8688    Perform the calculations below:

(a) $2 - [5 + (-7 + 2)]$ (b) $-(-5 + 2) + [(-8 + 3) - 7]$

E.1776    Perform the following calculations:

(a) $3 - (5 - 8)$ (b) $2 + (-3 - 8) - (2 \times 3 - 9)$

(c) $-[3 - (9 - 2 \times 10)]$ (d) $5 - [4 - (9 - 12)]$

E.1714    Correctly fill in the dotted lines with the missing relative number:

- (a) $(...) + 2 = -5$ (b) $13 - (...) = 15$
 (c) $2.1 + (...) = 1.9$ (d) $23 + (...) = 21.5$
 (e) $(...) + 9.4 - 5 = 4$ (f) $3 + (...) - 4 + 7 = -3$

6. Multiplications

E.1710    

1 Determine the value of the product $7 \times (-3)$ knowing that:

$$7 \times (-3) = (-3) + (-3) + (-3) + (-3) + (-3) + (-3) + (-3)$$

2 Let's find the result of the product $(-7) \times 3$:

- (a) Complete the extract from the multiplication table by 7:

	17	18	19	20	21	22	23	24
$\times 7$				140				
$\begin{array}{ccccccc} \leftarrow & & & & & & \rightarrow \\ & - & \dots & + & \dots & \end{array}$								
	-4	-3	-2	-1	0	1	2	3
$\times 7$						14		
$\begin{array}{ccccccc} \leftarrow & & & & & & \rightarrow \\ & - & \dots & + & \dots & \end{array}$								

- b Complete the following two sentences:
- The product of two positive numbers is a number of signs
 - The product of a positive number and a negative number is a number of signs

3 Perform the following calculations:

- a 3×7 b $10 \times (-4)$ c $(-5) \times 7$
 d 7×9 e $3 \times (-8)$ f $(-4) \times 9$

4 a Complete the table below, starting with the operation $3 \times (-7)$:

	-3	-2	-1	0	1	2	3	4
$\times (-7)$								

.....

- b Complete the following sentences:
- The product of two negative numbers is a number of signs

5 Perform the following calculations:

- a $5 \times (-4)$ b $(-3) \times 12$ c $(-4) \times (-8)$
 d 9×5 e $31 \times (-3)$ f $(-21) \times (-2)$

E.1724   

Rule for multiplying relative numbers:

The product of two relative numbers:

- is of sign:
 - positive:** if both factors are of the same sign,
 - negative:** if the two factors are of opposite signs.
- 's distance to zero is the product of the distances to zero of the two factors

Perform the following multiplications:

- a $(-2) \times 3$ b $-4 \times (-3)$
 c $(+2.5) \times (-5)$ d $(-2.4) \times (-1.5)$

E.1024    Copy and complete this double entry table:

$\times$	-5	+2	-1.4
3			
-5			
+20			

E.8669    Perform the calculations below, giving the results in simplified forms:

- a $\frac{5}{4} \times \left(-\frac{6}{7}\right)$ b $\left(-\frac{36}{7}\right) \times \left(-\frac{21}{8}\right)$
 c $\frac{1}{3} \times \frac{5}{7}$ d $\left(-\frac{7}{9}\right) \times \frac{3}{14}$

7. Multiplications of several factors

E.1023   

Proposal: To determine the sign of a product of several relative numbers, use the following **rule**:

- If the number of negative factors is even, then the product is positive.
- If the number of negative factors is odd, then the product is negative.

Give the sign of each of the following calculations:

- a $(-1) \times (-1) \times (-1)$
 b $(-1) \times (-1) \times (-1) \times (-1)$
 c $(-1) \times (-1) \times (+1) \times (-1)$
 d $(+1) \times (-1) \times (+1) \times (+1) \times (-1) \times (-1) \times (+1) \times (-1) \times (-1) \times (+1) \times (+1) \times (-1)$

E.1729    Determine the sign of the following expressions:

- a $(-1) \times (+1) \times (-1) \times (-1) \times (+1)$
 b $(-2) \times (-4) \times (-4) \times 2 \times (-0.5)$
 c $(-3) \times (-2) + (+5) \times (-2)$
 d $[(-1) \times (-2) \times (5)] \times [(+2) \times (-3)]$

E.1739    Perform the following multiplications:

- a $-3 \times (-2) \times 5 \times (-3)$ b $5 \times (-1) \times (+10) \times (-0.1)$
 c $2 \times (-8) \times 0.5 \times (-3)$ d $(-4) \times 5 \times 2 \times 0.25$

E.1025    By choosing the factors cleverly, perform the following calculations:

- a $(+4) \times (-0.1) \times 10 \times (-1) \times 0.25$
 b $-5 \times 0.1 \times (-4) \times (-5) \times 4 \times (-2) \times 3$

E.4387    Say whether the statements below are true or false:

① The sum of two relative integers is positive.

- ② The sum of 102 negative numbers is negative.
 ③ The product of 102 negative numbers is negative.
 ④ The opposite of a product is the product of the opposite of its factors.

8. Multiplication and sums

E.8672    Perform the calculations below:

- a $(-2) \times (+4) \times (-5)$ b $(-10) \times (+1) \times (-2) \times (-5)$
 c $-5 + 2 \times (-3)$ d $2 - 2 \times (-2)$

E.1013    Perform the calculations below:

- a $-3 + 5 \times (-2)$ b $(-6) \times (-2) - 5$
 c $-2 + 5 - 4 \times 2$ d $4 \times (-5) - 5$

E.8673   

- A $-5 + 3 \times (-2)$ b $-4 \times (-5) + 2$
 c $-3 + (-2) \times 5$ d $14 - 5 \times (-2)$
 e $3 - 2 \times 5$ f $-2 \times 3 - 3$

E.1027    In each of the calculations below, a number has been hidden. Knowing the sign of the result, is it possible to find the sign of the hidden number? If so, indicate the sign of this number.

- a $(-5) \times \clubsuit \times (+0.02)$ est positif
 b $-(+9) \times \spadesuit \times (-1.5)$ is negative
 c $(-9) + \diamond$ is positive
 d $(-3) - \star^2$ is négatif
 e $[(-3) + 3 \times (-2)^2] \times \blacksquare$ est négatif

E.1019   

For each expression, a number has been hidden; only its sign has been displayed. If possible, give the sign of the result of each expression:

- a $(-3) \times (-5) \times (+\blacksquare)$ b $-(-\blacksquare) \times (+1.8) \times (-0.1)$
 c $(+5) + (+\blacksquare)$ d $(+3.2) + (-\blacksquare)$
 e $(-3) \times (+\blacksquare) + (+7) \times (-\blacksquare)$ f $8 + (\blacksquare + 1) \times (\blacksquare + 1)$

9. Conducting calculations

E.8802   

Method: To correctly process priority operations one after the other, proper “calculation” is necessary. Watch the animation opposite:

Perform the following calculations, detailing the steps in your

E.1774    Some of the numbers in the equations below have been hidden. Copy the following equalities, completing them with the correct number:

- a $(-2) \times \blacksquare = 36$ b $(-7) \times \blacksquare \times (-0.5) = -14$
 c $\blacksquare \times 2 + 3 = -19$ d $\blacksquare \times 2 - 7 \times (-2) = -2$

E.1014    Complete, line by line, the table below using the values of a , b and c given:

a	b	c	$a \times b$	$a \times c$	$a \times b - a \times c$	$b + c$	$a \times (b + c)$
3	-2	5					
4	1.25	-2.5					
-3	-2	4					
1.2	4	6					

E.1015    Complete the table below row by row using, in each case, the values of a and b given:

a	b	$a + b$	$a - b$	$(a + b) \times (a - b)$
3	-2			
-5	-7			
-3	-2			
-1.5	2.5			

reasoning:

- a $(5 - 2) \times (3 - 5)$ b $2 - 3 \times (5 - 4 \times 2)$
 c $(2 - 2 \times 2) \times (4 - 7)$ d $-4 \times [2 \times (-2) - 3 \times (-4)]$

E.1723 Perform the following calculations:

- a $(9 - 13) \times (-2)$ b $(7 - 12) \times (-8 + 4)$
 c $-(2 - 2 \times 4) + 4$ d $5 - (-2 - 3)$
 e $(-3 + 5) \times (-5 - 7)$ f $5 - 2 \times (-3 + 5)$

Indications: we will indicate the calculation steps respecting the priorities of the operations as in the example opposite:

$$\begin{aligned} 5 + 2 \times (5 - 4 \times 5) \\ = 5 + 2 \times (5 - 20) \\ = 5 + 2 \times (-15) \\ = 5 + (-30) = -25 \end{aligned}$$

E.1740 Perform the following calculations:

- a $[-3 - (-7 + 5)] \times (-0.5)$ b $-2 + 3 \times (5 - 3 \times 5)$
 c $(2 - 3)[4 + (-2)](-3 - 4)$ d $-3 \times 2 - (-2) \times (-4)$
 e $[-2 - 3 \times (-3)] \times (-2) + 5$

E.1026 Perform the following calculations:

- a $30 - [2 + (-4) \times 3]$ b $(-2) \times 5 - (-3) \times (-2)$
 c $(50 - 62) \times (5 - 4)$ d $[2 \times (-4) - 5 \times 3] \times 2 - 10 \times 2.5$

Hint: calculations will be conducted with wording similar to:

$$\begin{aligned} [-2 - 3 \times (-2)] \times (-2) + 5 &= [-2 + 6] \times (-2) + 5 \\ &= 4 \times (-2) + 5 = -8 + 5 = -3 \end{aligned}$$

E.1028 Perform the following calculations:

- a $(-3) \times [3 - (+5)]$ b $4 - [5 \times (-2) + (-2)]$
 c $-4 \times [3 + (-4)] \times [-2 - (-3)]$

E.8689 Perform the calculations below:

- a $3 - 2 \times [2 + 3 \times (-2)]$ b $(2 \times 3 - 8) - (8 - 8 \times 2)$

E.8671 Perform the following calculations:

- a $[3 + (-5) \times 2] \times (-1)$
 b $[4.1 - 2 \times (-1.2)] \times [6.8 - 7.1]$
 c $(5 - 2 \times 3) - 2 \times [7 - 4 \times (2 \times 3 - 8)]$

E.4386 Perform the following calculations:

- a $15 - [8 + 3 \times (-2)]$ b $(8 - 15) \times [-12 - (-2) \times 5]$
 c $[(5 - 8) \times [-12 - 5 \times (-3)]] \times [5 - 2 \times [2 \times (-6) + 10]]$

E.1778 On each of the expressions below, the parentheses have been deleted; add, if necessary, the parentheses and brackets necessary to verify the proposed equalities:

- a $3 - 2 - 3 \times 2 - 4 = 4$ b $3 - 2 - 3 \times 2 - 4 = -3$
 c $3 - 2 - 3 \times 2 - 4 = -1$ d $3 - 2 - 3 \times 2 - 4 = -9$

E.6139 Calculations have been made but the brackets and braces have been removed. Copy the calculations on your copy, adding, if necessary, the correctly placed brackets and braces:

- a $2 - 3 + 2 \times 2 = -8$ b $2 - 3 + 2 \times 2 = 3$

10. Quotients

E.1747

Rule: The sign of a quotient is:

- o **positive** if numerator and denominator are of the same sign
- o **negative** if numerator and denominator have opposite signs.

Give the sign of each of the following calculations:

- a $(-3) \div (-2)$ b $2 \div (-1)$ c $(-3) \div 5$
 d $\frac{-5}{-8}$ e $\frac{-3}{5}$ f $\frac{5}{-7}$

E.4344 Write the fractions below in their simplified forms:

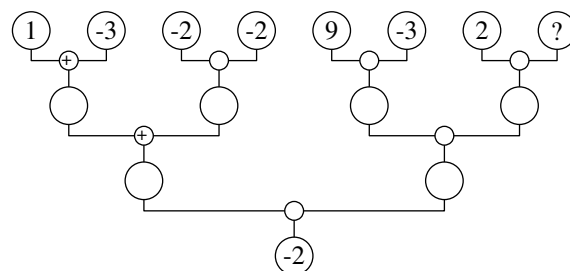
- a $\frac{-6}{2}$ b $\frac{15}{6}$ c $\frac{-4}{-16}$
 d $\frac{21}{-14}$ e $\frac{-3}{5}$ f $\frac{-150}{-100}$

11. Quotients and operations

E.4463 Perform the following calculations:

- a $-13 - 8$ b $6 \times (-3)$ c $5 - 13$
 d $-2 \times (-5)$ e $-\frac{24}{8}$ f $\frac{12}{-3}$

E.6138 Here is a calculation diagram:



Without justification, give the value of the number that must be present in the box with the sign "?" in order for all calculations to be correct.

E.4345    Calculate the expressions below and write their values as decimals:

a $7 + \frac{15}{-3}$ b $\frac{3-8}{-2-(-22)}$ c $\frac{5-7}{-8+3}$

E.4464    Perform the following calculations:

a $\frac{2 \times (-5) - 4}{3-5}$ b $\frac{7-5}{4 \times 7 - 30}$

E.8674    Perform the following calculations:

a $(3 \times 2 - 5) \div (2 - 2 \times 2)$ b $\frac{-3 \times (-2) + 4}{5 - 3 \times 2}$

Note:
calculations will be conducted with wording similar to:

$$\begin{array}{r} 2 \times (-5) - 4 \\ 3 - 5 \\ \hline -10 - 4 \\ -2 \\ \hline -14 \\ -2 \\ \hline -7 \end{array}$$

E.8676    Perform the following calculations and give the results in simplified form:

a $\frac{5 \times 2 - 7}{5-8}$ b $\frac{3 \times (-2) + 4}{3-3 \times 3}$ c $\frac{5-2 \times 3}{5 \times 6}$ d $\frac{5-36 \div 6}{60-8 \times 7}$

E.4383    Perform the following calculations and give the results in simplified form:

a $\frac{2 - [5 - 3 \times (2 - 4)]}{2 - 15 \div 5}$ b $\frac{12 \times 3 - 6 \times 6}{3 - [2 - (2 \times 5 - 12)]}$

Indication: calculations will be conducted with wording similar to:

$$\begin{array}{l} 3 \times [2 - 2 \times (5 - 2)] \\ 5 - 16 : 4 \\ \hline 3 \times [2 - 2 \times (-2)] \\ 5 - 4 \\ \hline 3 \times [2 - (-4)] \\ 1 \end{array} \quad \left| \quad \begin{array}{l} = \frac{3 \times (2 + 4)}{1} \\ = \frac{3 \times 6}{1} \\ = 18 \end{array} \right.$$

12. Squares of relative numbers

E.1017   

Definition: the square of a number is the product of that number by itself.

The square of the number x is noted x^2 .

Example: $3^2 = 3 \times 3 = 9$ $(-2)^2 = (-2) \times (-2) = 4$

Warning: writing -5^2 is the opposite of the square of 5 is worth -25 . **Example:** $-3^2 = -9$; $(-3)^2 = 9$

Perform the following calculations:

a 3^2 b $(-3)^2$ c -3^2
d 5^2 e $(-5)^2$ f -5^2

E.8675   

A 2×9^2 b -2×4^2 c $(-2 \times 4)^2$
d $-(-2)^2$ e $2^2 - 5^2$

E.1029    Perform the following calculations:

a -5^2 b $2 \times (-4)^2$ c $[3 \times (-2)]^2$
d $-[3 \times (-2)]^2$ e $2 - 3^2$ f $-(2 - 3)^2$

E.1018    Perform the following calculations:

A 2×6^2 b -2×3^2 c $(-3 \times 5)^2$
d $-(-9)^2$ e $7^2 - 2^2$

E.1741    Perform the following calculations:

a $(-3)^2 \times 2 - 13$ b $(2 \times 3 - 7)^2 + 2^2$
c $-3^2 \times (3 - 2 \times 5)$ d $5^2 - 9^2$
e $(2 - 3)^2 - (-3)^2$ f $2 \times (5 - 3^2)^2$

Note: calculations will be conducted with wording similar to:

$$\begin{array}{l} (12 - 2 \times 3^2)^2 \\ = (12 - 2 \times 9)^2 \\ = (12 - 18)^2 \end{array} \quad \left| \quad \begin{array}{l} = (-6)^2 \\ = 36 \end{array} \right.$$

E.8690    Perform the calculations below:

a $(12 - 2 \times 3^2)^2$ b $(1 + 3^2)^2 - 9^2$

E.1777    Perform the following calculations:

a $(-8 + 2 \times 3)^2$ b $(3 - 6)^2 \times (-2)$
c $-[2 - (-3)^2]^2$ d $[(5 - 9)^2 - 3^2]^2$

13. Literal expressions and relative numbers

E.1730    Consider the following equality:
 $3x - 7 = 2x - 11$

Test the previous equality using the following values:

a $x = -1$ b $x = 3$ c $x = -4$

E.1775     Consider the following two algebraic expressions:

$A = -3x + 1$; $B = -x^2 - 5x + 4$

Evaluate each of its expressions for the values:

$x = 1$; $x = -3$; $x = 0$

E.8678 Consider the expression: $C = -(3-x)^2 + 2x + 1$

Evaluate this expression for the values:

- a) $x = 5$ b) $x = -2$

E.1020 We consider the two literal expressions:

$$A = 2x^2 + 3x - 10 \quad ; \quad B = -x^2 + 4x + 42$$

- 1) Prove the equality of these two expressions for $x = -4$.
- 2) Test the equality of these two expressions for $x = 2$.

E.1030 Consider the following literal expressions:

$$A = -x^2 + 4x - 5 \quad ; \quad B = (12 - x)^2 + 5$$

$$C = (2x - 9)(3 - x)$$

1) Evaluate the literal expression A for $x = 6$.

2) What is the value of the literal expression B for $x = 15$?

3) Evaluate the literal expression C for $x = 3$.

E.8677 Evaluate the expression $C = -(2+x)^2 + 2x + 1$ for the values:

- a) $x = 5$ b) $x = -2$

E.1022 We consider the two literal expressions:

$$A = -2x^2 + 2 \quad ; \quad B = (2x^2 - 2)(2x + 3)$$

- 1) Prove the equality of A and B for $x = -2$.
- 2) Test this equality for $x = 2$.

14. Calculation sheet and calculation program

E.8684 The following spreadsheet is used:

	A	B	C	D	E	F
1	-3	-2	-1	0	1	2
2	-13					

After entering the formula " $3 \times A1 - 4$ " in cell A2, extend this formula to the right. Complete the table to show the results.

E.8681 The following calculation program is given:

- Choose a number
- Add 1
- Square the result
- Subtract the square of the starting number from the result.

- 1) Show that when we choose the number 2 at the start, we get the number 5 at the end.
- 2) What result do we get when we choose the number -3 at the start?

E.8680 We consider the calculation program:

- Choose a number
- Take the square of this number
- Add triple the starting number
- Add 2

- 1) Show that if we choose 1 as the starting number, the program gives 6 as the result.
- 2) What result do we get if we choose -5 as the starting number?

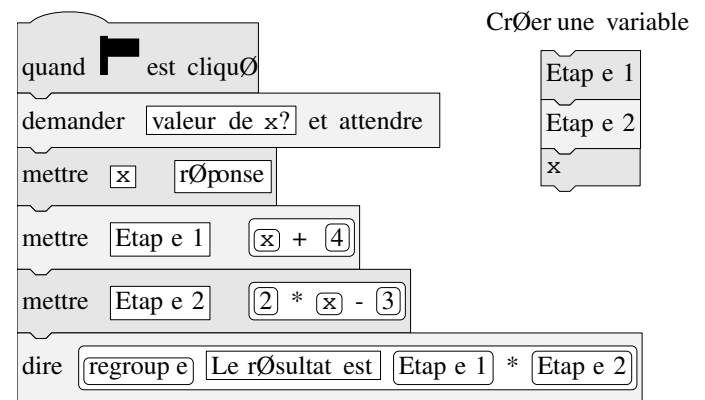
3) We call x the starting number, express the result of the program in terms of x .

4) Consider the worksheet below:

	A	B	C	D	E	F
1	x	5	1	0	1	3
2	$x^2 + 3$	$x + 2$	12	2		20

- a) Complete the worksheet.
- b) Which formula was written in cell B2 before extending it to cell J2?

E.8685 Laura created three variables and then made the script below:



- 1) Check that if the value of x is 5 then the result is 63.
- 2) What result do we get if the value of x is -3 ?
- 3) Of the following expressions, copy the one that matches the calculation program given by the script.
 - $(x + 4) \times (2x - 3)$
 - $x + 4 \times 2x - 3$
 - $x + 4 \times (2x - 3)$

15. Share

E.8729   Calculate the following expressions by detailing the steps:

- (a) $9 - 15 + 2 - 7$ (b) $4 \times (-2) \times (-3)$
 (c) $-8 + 2 \times (-2)$ (d) $(5 - 7)(-3 + 5)$
 (e) $5 + 3 \times (7 - 3 \times 5)$

E.8730   Calculate the following expressions by detailing the steps:

- (a) $8 - 10 + 4 - 11$ (b) $3 \times (-3) \times (-2)$
 (c) $8 + (-4) \times (-2)$ (d) $(4 - 7)(-3 + 5)$
 (e) $5 + 2 \times (5 - 4 \times 5)$

E.8776   Perform the calculations:

- (a) $5 - 2 \times 5$ (b) $(-3) \times 2 + (-2) \times (-5)$
 (c) $2 - [1 - 3 \times (3 - 5)]$

E.8788   Perform the following calculations, detailing the steps:

- (a) $-4 \times 3 - 3 \times (-2)$ (b) $-2 \times (5 - 2 \times 3) - 3$

16. *Unclassified exercises*

E.2086    Compare the following fractions:

- (a) $\frac{3}{7} \dots \frac{3}{8}$ (b) $-\frac{9}{4} \dots -\frac{11}{4}$ (c) $\frac{6}{7} \dots \frac{13}{12}$
 (d) $\frac{2}{6} \dots \frac{2}{4}$ (e) $\frac{3}{7} \dots \frac{2}{5}$ (f) $\frac{7}{3} \dots \frac{9}{4}$