

Key answer

المدرسة
الوطنية الأرثوذكسية
الشميساني



The National
Orthodox School
Shmaisani

Worksheet (4) | Lower Secondary Stage (6-8)

1st Semester | 2023-2024

Name:

Date: / /

Subject: math

Class: Grade 8

Subject: **Factoring Trinomials**

Date :

Factoring a Trinomial when a=1

$$x^2 + 6x + 8$$

$$(x+4)(x+2)$$

Factor $x^2 - 7x + 10$ $x^2 = x \cdot x$

$$(x - 2)(x - 5)$$

FOIL

First Outer Inner Last

$$x^2 - 5x - 2x + 10$$

Simplify

$$x^2 - 7x + 10$$

$$\cancel{1 \cdot 10}$$

$$\cancel{2 \cdot 5}$$

$$\cancel{-1 \cdot -10}$$

$$\boxed{-2 \cdot -5}$$

Accredited by



Cambridge Assessment
International Education
Cambridge International School

edexcel

CIS
COUNCIL OF
INTERNATIONAL
SCHOOLS



معتمدة من

Exercise : Factorise each of the following expressions completely:

بحدد الإشارة
بحدد العدد الأكبر

1 $x^2 + 2x - 24$ Subtract product
 $(x + 6)(x - 4)$
 $1 \times 24 \rightarrow$
 2×12
 3×8
 $4 \times 6 \rightarrow 6 - 4 = 2$

2 $y^2 + 3y - 10$ Subtract product
 $(y - 2)(y + 5)$

3 $x^2 + 29x + 100$ Sum product
 $(x + 4)(x + 25)$
 product
 1×100
 2×50
 $3 \times \dots$
 4×25
 5×20
 10×10
 stop

4 $w^2 - 6w + 8$ Sum product
 $(w - 2)(w - 4)$
 حاصل ضرب (8)
 Product Sum (6)
 1×8
 2×4
 $3 \times \dots$
 4×2
 Repeated

5 $-10q + q^2 + 21$
 $q^2 - 10q + 21$
 $(q - 3)(q - 7)$

6 $y^2 + 20y + 100$
 $(y + 10)(y + 10)$

7 $a^2 + 5a + 6$
 $(a + 2)(a + 3)$

8 $w^2 - 9w - 10$ Subtract product
 $(w - 10)(w + 1)$

9 $x^2 + x - 30$
 $(x - 5)(x + 6)$

10 $13y + 30 + y^2$
 $y^2 + 13y + 30$ Sum product
 $(y + 3)(y + 10)$

11 $w^2 + 11w + 18$ Sum product
 $(w + 9)(w + 2)$

12 $t^2 - t - 90$
 $(t + 9)(t - 10)$
 1×90
 2×45
 3×30
 5×18
 6×15
 $7 \times \dots$
 $8 \times \dots$
 9×10
 قرة

Product Sum = product

13 $f^2 + 23f + 21$

$3 \times 7 \rightarrow 21$

$(f + 21)(f + 1)$

Product Sum

1×8

$2 \times 4 \rightarrow 11$

3×6

14 $h^2 - h - 72$

انت، الاعداد التي
تكون 6×8

$(h + 8)(h - 9)$

15 $m^2 - 18m + 81$

$(m - 9)(m - 9)$

16 $x^2 + x - 72$

$(x + 9)(x - 8)$

17 $x^2 - 8x - 9$

$(x + 1)(x - 9)$

18 $x^2 + 2x - 48$

$6 \quad 8$

$\leftarrow \rightarrow$

$(x - 6)(x + 8)$

Example (1):

$$x^2 + 7x + 12 =$$

$$(x+3)(x+4)$$

Example (2):

$$x^2 - 10x + 16 =$$

$$(x-2)(x-8)$$

when c +ve number

$$\begin{array}{cc} (+) & (+) \\ (-) & (-) \end{array}$$

Example (3):

$$x^2 + x - 20 =$$

$$(x-4)(x+5)$$

التربة الاكبر
5
4

when c -ve number

$$\begin{array}{cc} (+) & (-) \end{array}$$