

حلل العبارات التالية :	
$E_{31} = (3x + 3)(5x - 2) + 2(3x + 3)$	.31
$E_{32} = (8x - 5)(-6x + 3) - 4(8x - 5)$	.32
$E_{33} = (-6x + 5)(-6x - 4) - 2(-6x + 5)$	.33
$E_{34} = (-4x - 7)(5x + 9) + 2(5x + 9)$	.34
$E_{35} = (-8x - 8)(5x - 9) + 8(5x - 9)$	.35
$E_{36} = (-8x - 8)(-6x + 7) - (-8x - 8)$	.36
$E_{37} = (-7x + 9)(4x - 9) - 9(4x - 9)$	.37
$E_{38} = (-6x - 6)(-8x - 3) + 3(-6x - 6)$	.38
$E_{39} = (6x + 7)(-2x + 2) + 4(6x + 7)$	.39
$E_{40} = (7x - 8)(4x + 2) - 6(4x + 2)$	.40
$E_{41} = (4x - 2)(-6x - 6) + 4(-6x - 6)$	.41
$E_{42} = (-9x + 4)(-7x - 7) + 3(-7x - 7)$	.42
$E_{43} = (-4x - 5)(2x + 3) + 7(-4x - 5)$	.43
$E_{44} = (-7x + 4)(-5x + 2) - 5(-7x + 4)$	.44
$E_{45} = (-6x - 5)(7x - 3) - 8(-6x - 5)$	.45
$E_{46} = (6x + 7)(5x + 6) + 7(6x + 7)$	.46
$E_{47} = (6x + 4)(-2x - 3) + 6(-2x - 3)$	.47
$E_{48} = (8x + 3)(-2x + 5) + 7(8x + 3)$	.48
$E_{49} = (-2x + 4)(-7x + 7) - 4(-2x + 4)$	.49
$E_1 = (-2x - 3)(-3x - 2) - 5(-2x - 3)$	.1
$E_2 = (3x + 3)(-5x - 9) + 6(-5x - 9)$	.2
$E_3 = (-8x + 2)(8x + 9) - 6(8x + 9)$	.3
$E_4 = (-9x + 7)(-9x - 7) + 9(-9x + 7)$	.4
$E_5 = (9x + 8)(2x - 9) + 8(2x - 9)$	.5
$E_6 = (6x + 2)(-4x - 5) - 9(-4x - 5)$	.6
$E_7 = (9x - 7)(-7x - 9) - 6(9x - 7)$	.7
$E_8 = (-2x + 9)(-7x - 3) - 8(-2x + 9)$	.8
$E_9 = (-6x + 7)(8x - 2) - (-6x + 7)$	.9
$E_{10} = (-5x - 8)(-4x + 8) + 7(-4x + 8)$	.10
$E_{11} = (-5x + 4)(7x + 7) + 8(-5x + 4)$	.11
$E_{12} = (9x + 9)(-8x + 8) + 5(-8x + 8)$	.12
$E_{13} = (2x + 9)(2x - 8) + 6(2x - 8)$	.13
$E_{14} = (-2x - 7)(2x + 8) - 3(2x + 8)$	.14
$E_{15} = (9x - 3)(-8x + 2) - 8(-8x + 2)$	.15
$E_{16} = (-7x + 6)(7x - 8) - 8(-7x + 6)$	.16
$E_{17} = (5x - 7)(-7x - 7) + 3(5x - 7)$	.17
$E_{18} = (-9x - 5)(-8x - 4) - 3(-9x - 5)$	.18
$E_{19} = (-3x + 8)(8x + 8) + 3x - 8$	.19
$E_{20} = (7x + 7)(8x - 8) + 8(8x - 8)$	.20
$E_{21} = (8x - 9)(7x + 6) - 8(8x - 9)$	.21
$E_{22} = (8x + 4)(2x + 7) + 6(2x + 7)$	.22
$E_{23} = (-8x - 9)(8x + 3) - 7(8x + 3)$	.23
$E_{24} = (2x + 8)(5x + 8) - 8(5x + 8)$	.24
$E_{25} = (6x + 2)(-4x - 8) - 7(6x + 2)$	.25
$E_{26} = (9x - 4)(-7x + 4) + 5(9x - 4)$	.26
$E_{27} = (-3x + 2)(-3x + 9) + 6(-3x + 9)$	.27
$E_{28} = (9x - 2)(8x - 4) + 3(9x - 2)$	.28
$E_{29} = (7x + 8)(7x - 7) + 9(7x + 8)$	.29
$E_{30} = (-3x - 8)(-8x - 2) - 7(-3x - 8)$	.30

التصحيح :

7.

$$\begin{aligned}
 E_7 &= (9x - 7)(-7x - 9) - 6(9x - 7) \\
 &= (9x - 7)(-7x - 9) - 6 \times (9x - 7) \\
 &= (9x - 7) \left[-7x - 9 - 6 \right] \\
 &= (9x - 7)(-7x - 15)
 \end{aligned}$$

8.

$$\begin{aligned}
 E_8 &= (-2x + 9)(-7x - 3) - 8(-2x + 9) \\
 &= (-2x + 9)(-7x - 3) - 8 \times (-2x + 9) \\
 &= (-2x + 9) \left[-7x - 3 - 8 \right] \\
 &= (-2x + 9)(-7x - 11)
 \end{aligned}$$

9.

$$\begin{aligned}
 E_9 &= (-6x + 7)(8x - 2) - (-6x + 7) \\
 &= (-6x + 7)(8x - 2) - 1 \times (-6x + 7) \\
 &= (-6x + 7) \left[8x - 2 - 1 \right] \\
 &= (-6x + 7)(8x - 3)
 \end{aligned}$$

10.

$$\begin{aligned}
 E_{10} &= (-5x - 8)(-4x + 8) + 7(-4x + 8) \\
 &= (-5x - 8)(-4x + 8) + 7 \times (-4x + 8) \\
 &= (-4x + 8) \left[-5x - 8 + 7 \right] \\
 &= (-4x + 8)(-5x - 1)
 \end{aligned}$$

11.

$$\begin{aligned}
 E_{11} &= (-5x + 4)(7x + 7) + 8(-5x + 4) \\
 &= (-5x + 4)(7x + 7) + 8 \times (-5x + 4) \\
 &= (-5x + 4) \left[7x + 7 + 8 \right] \\
 &= (-5x + 4)(7x + 15)
 \end{aligned}$$

12.

$$\begin{aligned}
 E_{12} &= (9x + 9)(-8x + 8) + 5(-8x + 8) \\
 &= (9x + 9)(-8x + 8) + 5 \times (-8x + 8) \\
 &= (-8x + 8) \left[9x + 9 + 5 \right] \\
 &= (-8x + 8)(9x + 14)
 \end{aligned}$$

13.

$$\begin{aligned}
 E_{13} &= (2x + 9)(2x - 8) + 6(2x - 8) \\
 &= (2x + 9)(2x - 8) + 6 \times (2x - 8) \\
 &= (2x - 8) \left[2x + 9 + 6 \right] \\
 &= (2x - 8)(2x + 15)
 \end{aligned}$$

1.

$$\begin{aligned}
 E_1 &= (-2x - 3)(-3x - 2) - 5(-2x - 3) \\
 &= (-2x - 3)(-3x - 2) - 5 \times (-2x - 3) \\
 &= (-2x - 3) \left[-3x - 2 - 5 \right] \\
 &= (-2x - 3)(-3x - 7)
 \end{aligned}$$

2.

$$\begin{aligned}
 E_2 &= (3x + 3)(-5x - 9) + 6(-5x - 9) \\
 &= (3x + 3)(-5x - 9) + 6 \times (-5x - 9) \\
 &= (-5x - 9) \left[3x + 3 + 6 \right] \\
 &= (-5x - 9)(3x + 9)
 \end{aligned}$$

3.

$$\begin{aligned}
 E_3 &= (-8x + 2)(8x + 9) - 6(8x + 9) \\
 &= (-8x + 2)(8x + 9) - 6 \times (8x + 9) \\
 &= (8x + 9) \left[-8x + 2 - 6 \right] \\
 &= (8x + 9)(-8x - 4)
 \end{aligned}$$

4.

$$\begin{aligned}
 E_4 &= (-9x + 7)(-9x - 7) + 9(-9x + 7) \\
 &= (-9x + 7)(-9x - 7) + 9 \times (-9x + 7) \\
 &= (-9x + 7) \left[-9x - 7 + 9 \right] \\
 &= (-9x + 7)(-9x + 2)
 \end{aligned}$$

5.

$$\begin{aligned}
 E_5 &= (9x + 8)(2x - 9) + 8(2x - 9) \\
 &= (9x + 8)(2x - 9) + 8 \times (2x - 9) \\
 &= (2x - 9) \left[9x + 8 + 8 \right] \\
 &= (2x - 9)(9x + 16)
 \end{aligned}$$

6.

$$\begin{aligned}
 E_6 &= (6x + 2)(-4x - 5) - 9(-4x - 5) \\
 &= (6x + 2)(-4x - 5) - 9 \times (-4x - 5) \\
 &= (-4x - 5) \left[6x + 2 - 9 \right] \\
 &= (-4x - 5)(6x - 7)
 \end{aligned}$$

.21

$$\begin{aligned}
 E_{21} &= (8x - 9)(7x + 6) - 8(8x - 9) \\
 &= (8x - 9)(7x + 6) - 8 \times (8x - 9) \\
 &= (8x - 9)[7x + 6 - 8] \\
 &= (8x - 9)(7x - 2)
 \end{aligned}$$

.22

$$\begin{aligned}
 E_{22} &= (8x + 4)(2x + 7) + 6(2x + 7) \\
 &= (8x + 4)(2x + 7) + 6 \times (2x + 7) \\
 &= (2x + 7)[8x + 4 + 6] \\
 &= (2x + 7)(8x + 10)
 \end{aligned}$$

.23

$$\begin{aligned}
 E_{23} &= (-8x - 9)(8x + 3) - 7(8x + 3) \\
 &= (-8x - 9)(8x + 3) - 7 \times (8x + 3) \\
 &= (8x + 3)[-8x - 9 - 7] \\
 &= (8x + 3)(-8x - 16)
 \end{aligned}$$

.24

$$\begin{aligned}
 E_{24} &= (2x + 8)(5x + 8) - 8(5x + 8) \\
 &= (2x + 8)(5x + 8) - 8 \times (5x + 8) \\
 &= (5x + 8)[2x + 8 - 8] \\
 &= (5x + 8)(2x) \\
 &= 2x(5x + 8)
 \end{aligned}$$

.25

$$\begin{aligned}
 E_{25} &= (6x + 2)(-4x - 8) - 7(6x + 2) \\
 &= (6x + 2)(-4x - 8) - 7 \times (6x + 2) \\
 &= (6x + 2)[-4x - 8 - 7] \\
 &= (6x + 2)(-4x - 15)
 \end{aligned}$$

.26

$$\begin{aligned}
 E_{26} &= (9x - 4)(-7x + 4) + 5(9x - 4) \\
 &= (9x - 4)(-7x + 4) + 5 \times (9x - 4) \\
 &= (9x - 4)[-7x + 4 + 5] \\
 &= (9x - 4)(-7x + 9)
 \end{aligned}$$

.14

$$\begin{aligned}
 E_{14} &= (-2x - 7)(2x + 8) - 3(2x + 8) \\
 &= (-2x - 7)(2x + 8) - 3 \times (2x + 8) \\
 &= (2x + 8)[-2x - 7 - 3] \\
 &= (2x + 8)(-2x - 10)
 \end{aligned}$$

.15

$$\begin{aligned}
 E_{15} &= (9x - 3)(-8x + 2) - 8(-8x + 2) \\
 &= (9x - 3)(-8x + 2) - 8 \times (-8x + 2) \\
 &= (-8x + 2)[9x - 3 - 8] \\
 &= (-8x + 2)(9x - 11)
 \end{aligned}$$

.16

$$\begin{aligned}
 E_{16} &= (-7x + 6)(7x - 8) - 8(-7x + 6) \\
 &= (-7x + 6)(7x - 8) - 8 \times (-7x + 6) \\
 &= (-7x + 6)[7x - 8 - 8] \\
 &= (-7x + 6)(7x - 16)
 \end{aligned}$$

.17

$$\begin{aligned}
 E_{17} &= (5x - 7)(-7x - 7) + 3(5x - 7) \\
 &= (5x - 7)(-7x - 7) + 3 \times (5x - 7) \\
 &= (5x - 7)[-7x - 7 + 3] \\
 &= (5x - 7)(-7x - 4)
 \end{aligned}$$

.18

$$\begin{aligned}
 E_{18} &= (-9x - 5)(-8x - 4) - 3(-9x - 5) \\
 &= (-9x - 5)(-8x - 4) - 3 \times (-9x - 5) \\
 &= (-9x - 5)[-8x - 4 - 3] \\
 &= (-9x - 5)(-8x - 7)
 \end{aligned}$$

.19

$$\begin{aligned}
 E_{19} &= (-3x + 8)(8x + 8) + 3x - 8 \\
 &= (-3x + 8)(8x + 8) - 1 \times (-3x + 8) \\
 &= (-3x + 8)[8x + 8 - 1] \\
 &= (-3x + 8)(8x + 7)
 \end{aligned}$$

.20

$$\begin{aligned}
 E_{20} &= (7x + 7)(8x - 8) + 8(8x - 8) \\
 &= (7x + 7)(8x - 8) + 8 \times (8x - 8) \\
 &= (8x - 8)[7x + 7 + 8] \\
 &= (8x - 8)(7x + 15)
 \end{aligned}$$

.33

$$\begin{aligned}
 E_{33} &= (-6x + 5)(-6x - 4) - 2(-6x + 5) \\
 &= (-6x + 5)(-6x - 4) - 2 \times (-6x + 5) \\
 &= (-6x + 5) \left[-6x - 4 - 2 \right] \\
 &= (-6x + 5)(-6x - 6)
 \end{aligned}$$

.34

$$\begin{aligned}
 E_{34} &= (-4x - 7)(5x + 9) + 2(5x + 9) \\
 &= (-4x - 7)(5x + 9) + 2 \times (5x + 9) \\
 &= (5x + 9) \left[-4x - 7 + 2 \right] \\
 &= (5x + 9)(-4x - 5)
 \end{aligned}$$

.35

$$\begin{aligned}
 E_{35} &= (-8x - 8)(5x - 9) + 8(5x - 9) \\
 &= (-8x - 8)(5x - 9) + 8 \times (5x - 9) \\
 &= (5x - 9) \left[-8x - 8 + 8 \right] \\
 &= (5x - 9)(-8x) \\
 &= -8x(5x - 9)
 \end{aligned}$$

.36

$$\begin{aligned}
 E_{36} &= (-8x - 8)(-6x + 7) - (-8x - 8) \\
 &= (-8x - 8)(-6x + 7) - 1 \times (-8x - 8) \\
 &= (-8x - 8) \left[-6x + 7 - 1 \right] \\
 &= (-8x - 8)(-6x + 6)
 \end{aligned}$$

.37

$$\begin{aligned}
 E_{37} &= (-7x + 9)(4x - 9) - 9(4x - 9) \\
 &= (-7x + 9)(4x - 9) - 9 \times (4x - 9) \\
 &= (4x - 9) \left[-7x + 9 - 9 \right] \\
 &= (4x - 9)(-7x) \\
 &= -7x(4x - 9)
 \end{aligned}$$

.38

$$\begin{aligned}
 E_{38} &= (-6x - 6)(-8x - 3) + 3(-6x - 6) \\
 &= (-6x - 6)(-8x - 3) + 3 \times (-6x - 6) \\
 &= (-6x - 6) \left[-8x - 3 + 3 \right] \\
 &= (-6x - 6)(-8x) \\
 &= -8x(-6x - 6)
 \end{aligned}$$

.27

$$\begin{aligned}
 E_{27} &= (-3x + 2)(-3x + 9) + 6(-3x + 9) \\
 &= (-3x + 2)(-3x + 9) + 6 \times (-3x + 9) \\
 &= (-3x + 9) \left[-3x + 2 + 6 \right] \\
 &= (-3x + 9)(-3x + 8)
 \end{aligned}$$

.28

$$\begin{aligned}
 E_{28} &= (9x - 2)(8x - 4) + 3(9x - 2) \\
 &= (9x - 2)(8x - 4) + 3 \times (9x - 2) \\
 &= (9x - 2) \left[8x - 4 + 3 \right] \\
 &= (9x - 2)(8x - 1)
 \end{aligned}$$

.29

$$\begin{aligned}
 E_{29} &= (7x + 8)(7x - 7) + 9(7x + 8) \\
 &= (7x + 8)(7x - 7) + 9 \times (7x + 8) \\
 &= (7x + 8) \left[7x - 7 + 9 \right] \\
 &= (7x + 8)(7x + 2)
 \end{aligned}$$

.30

$$\begin{aligned}
 E_{30} &= (-3x - 8)(-8x - 2) - 7(-3x - 8) \\
 &= (-3x - 8)(-8x - 2) - 7 \times (-3x - 8) \\
 &= (-3x - 8) \left[-8x - 2 - 7 \right] \\
 &= (-3x - 8)(-8x - 9)
 \end{aligned}$$

.31

$$\begin{aligned}
 E_{31} &= (3x + 3)(5x - 2) + 2(3x + 3) \\
 &= (3x + 3)(5x - 2) + 2 \times (3x + 3) \\
 &= (3x + 3) \left[5x - 2 + 2 \right] \\
 &= (3x + 3)(5x) \\
 &= 5x(3x + 3)
 \end{aligned}$$

.32

$$\begin{aligned}
 E_{32} &= (8x - 5)(-6x + 3) - 4(8x - 5) \\
 &= (8x - 5)(-6x + 3) - 4 \times (8x - 5) \\
 &= (8x - 5) \left[-6x + 3 - 4 \right] \\
 &= (8x - 5)(-6x - 1)
 \end{aligned}$$