

8.2 Binomial Products Continued

24. $(x+2)(x-5)$ FOIL

$$\begin{aligned} &= x^2 - 5x + 2x - 10 \\ &= x^2 - 3x - 10 \end{aligned}$$

26. $(a+9)(a-5)$

$$\begin{aligned} &= a^2 - 5a + 9a - 45 \\ &= a^2 + 4a - 45 \end{aligned}$$

31. $(x+5)(2x+1)$

$$\begin{aligned} &= 2x^2 + x + 10x + 5 \\ &= 2x^2 + 11x + 5 \end{aligned}$$

33. $(x-1)(2x-1)$

$$\begin{aligned} &= 2x^2 - x - 2x + 1 \\ &= 2x^2 - 3x + 1 \end{aligned}$$

44. $(x-1.2)(x+3)$

$$\begin{aligned} &= x^2 + 3x - 1.2x - 3.6 \\ &= x^2 + 1.8x - 3.6 \end{aligned}$$

47. $2(x+3)(x+5)$

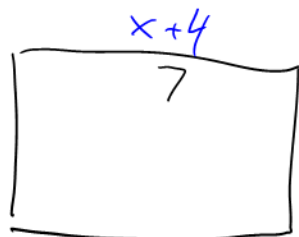
$$\begin{aligned} &= 2(x^2 + 5x + 3x + 15) \\ &= 2(x^2 + 8x + 15) \\ &= 2x^2 + 16x + 30 \end{aligned}$$

$2 \times 3 \times 5$

BEDMAS
↑ brackets

You do: 37, 41, 46, 51

55a)



$x=3$

$x=3$

Method 1

$A = 3 \times 7$

$A = 21 \text{ cm}^2$

$A = lw$

Method 2

$A = x(x+4)$

$A = x^2 + 4x$

$A = (3)^2 + 4(3)$

$A = 9 + 12$

$A = 21 \text{ cm}^2$

58. $1000(1+r)^2$

a) $1000(1+r)(1+r)$

$= 1000(1+r+r+r^2)$

$= 1000(1+2r+r^2)$

$= 1000 + 2000r + 1000r^2$

b) $r = 0.08$

$1000(1+0.08)^2$

$= 1000(1.08)^2$

$= 1000(1.1664)$

$= 1166.40$

13

20

2 10

2 5

$= 2^2 \times 5$

8.4 Factoring Trinomials

$x^2 + bx + c$

5.

a)

Sum $m+n$	Product mn	m	n
7	12	3	4

b)

Sum $m+n$	Product mn	m	n
8	15	3	5

c)

Sum $m+n$	Product mn	m	n
13	12	1	12

d)

Sum $m+n$	Product mn	m	n
18	77	7	11

$$\begin{array}{l} +, +2 \\ -, -6 \\ \textcircled{-3, -4} \end{array}$$

1, 77

7, 11

$-1, -15$

$\textcircled{-3, -5}$

e)	-8	15	-3	-5
f)	-7	12	-3	-4
g)	8	-20	-2	10
h)	-5	-24	3	-8

$$\begin{array}{r} -1, 20 \\ -2, 10 \\ -4, 5 \end{array}$$

$$\begin{array}{r} 1, -24 \\ 2, -12 \\ 3, -8 \\ 4, -6 \end{array}$$

$$\begin{array}{r} 1, 10 \\ 2, 5 \end{array}$$

7. $x^2 + 7x + 10$ $\begin{array}{l} \textcircled{\times} 10 \\ \textcircled{+} 7 \end{array}$

$$= (x+2)(x+5)$$

check: $x^2 + 5x + 2x + 10$

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

8. $y^2 - 8y + 15$ $\begin{array}{l} \textcircled{\times} 15 \\ \textcircled{+} -8 \end{array} \rightarrow \begin{array}{r} -1, -15 \\ -3, -5 \end{array}$

$$= (y-3)(y-5)$$

hw: pg 280 # 23-556

pg 283 # 6-15