Special Products and Factoring.

Factoring Expressions with Common Factors (8.2)

1. $12x + 18y = \underline{6}(2x + 3y)$

2. $3x^2 - 5x = x(3x - 5)$

5. $8abc - 12ab = 4ab(2c - 3)$

6. $3y^2 + 18y = 3y(y + 6)$

8. $4a^3 - 8a^2 = 4a^2(a - 2)$

10. $33ab - 22b = 11b(3a - 2)$

12. $27a^2b^2 - 18ab + 9b = 9b(3a^2b - 2a + 1)$

15. $10x + 15 = 5(2x + 3)$

17. $2mn - n = n(2m - 1)$

You do 19, 21, 23, 25 on the boards.

27. $12x^3 - 6x^2 + 24x = 6x(2x^2 - x + 4)$

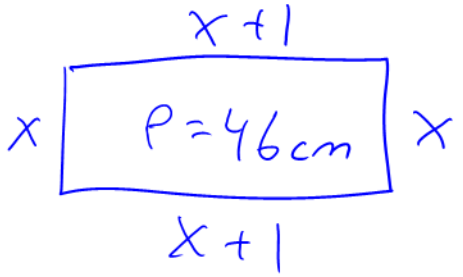
29. $24x^4y - 18x^3y + 12x^2y^2$

$= 6x^2y(4x^2 - 3x + 2y)$

31. $25m^3n - 15m^2n^2 + 5mn^3$

$= 5mn(5m^2 - 3mn + n^2)$

33.



$x + x+1 + x + x+1 = 46$

$4x + 2 = 46$ (−2 from each side)

$4x = 44$

$\frac{4x}{4} = \frac{44}{4}$

$x = 11$

$\boxed{2x + 2(x+1) = 46}$

∴ the dimensions are 11cm and 12cm

34a) $\underline{(a+b)x} + \underline{(a+b)y}$

$= (a+b)(x+y)$

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

8.3 Binomial Products (pg 280)

6. $x(2x+3) = 2x^2 + 3x$

10. $-2x(3x+5y) = -6x^2 - 10xy$

11. $(x+1)(x+2)$

$= x(x+1) + 2(x+1)$

$= x^2 + x + 2x + 2$

$= x^2 + 3x + 2$

First
Outside
Inside
Last

15. $(x-4)(x-3)$

$= x(x-4) - 3(x-4)$

$= x^2 - 4x - 3x + 12$

$= x^2 - 7x + 12$

19. $(x-6)(x+3)$

$= x^2 + 3x - 6x - 18$

$= x^2 - 3x - 18$

21. $(t+10)(t-10)$

$= t^2 - 10t + 10t - 100$

$= t^2 - 100$

Hw: 8.2 pg 278 All
8.3 pg 280 5-22