

U3L2 wkst

Practice

State the missing factor.

- $12x + 18y = (\square)(2x + 3y)$
- $3x^2 - 5x = (\square)(3x - 5)$
- $4ab + 3ac = (\square)(4b + 3c)$
- $5x^2 + 10x = (\square)(x + 2)$
- $8abc - 12ab = (\square)(2c - 3)$

Copy and complete.

- $3y^2 + 18y = 3y(y + \square)$
- $14a - 12b = 2(\square - 6b)$
- $4a^3 - 8a^2 = 4a^2(\square - 2)$
- $10x^3 - 5x^2 + 15x = 5x(2x^2 - \square + \square)$

Copy and complete.

- $33ab - 22b = 11b(\square - \square)$
- $4a^3 - 10a^2 + 6a = 2a(\square - \square + \square)$
- $27a^2b^2 - 18ab + 9b = 9b(\square - \square + \square)$
- $6x^2y - 4xy^2 = 2xy(\square - \square)$
- $9a^3b - 12ab^4 = 3ab(\square - \square)$

Factor each binomial.

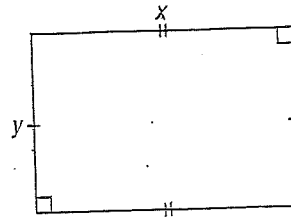
- $10x + 15$
- $2mn - n$
- $8x^2 + 4x^3$
- $4x^2y^2 - 6xy^2z^2$
- $6x^2y^3z + 12xy^2z$
- $28y - 14$
- $5x^2 + 10x$
- $9a^3b^2 - 6a^2b$
- $14a^2b^4 - 21b^2c^2$
- $15a^2b^5 - 9b^4c^5$

Problems and Applications

Factor each trinomial.

- $9a - 6b + 3$
- $4a - 8b + 16$
- $12x^3 - 6x^2 + 24x$
- $10x^3 - 5x^2 + 15x$
- $24x^4y - 18x^3y + 12x^2y^2$
- $8a^2b + 16ab - 24a$
- $25m^3n - 15m^2n^2 + 5mn^3$

32. a) Write the rectangle's perimeter as the sum of 2 different products and as the product of a number and a sum.



- b) Which of the 2 forms in part a) is the factored form?

33. The perimeter of a rectangle is 46 cm. The length is 1 cm longer than the width. What are the rectangle's dimensions?

34. Find the GCF of each expression and factor fully.

- $(a + b)x + (a + b)y$
- $x(x - 2) + 3(x - 2)$
- $x(2x - 3) - 5(2x - 3)$
- $2a(a - b) + b(a - b)$

35. If you stand on the Earth and jump up at 5 m/s, your approximate height in metres above the ground after t seconds is given by the expression $5t - 5t^2$.

- Factor the binomial.
- Evaluate for $t = 0.4$ s.

PATTERN POWER

Find the missing number.

4	7	8	5
3	 	3	4
2	5	7	3
2	3	5	2