NAME _____ DATE _____ PERIOD _____

# Lesson 5 Skills Practice

## *Factoring Linear Expressions*

**Factor each expression. If the expression cannot be factored, write *cannot be factored.* Use algebra tiles if needed.**

**1.** $17x + 34$

**2.** $10x + 25$

**3.** $30x + 18$

**4.** $45x - 18$

**5.** $38x - 12$

**6.** $28x + 15$

**7.** $3x - 27$

**8.** $6x + 24$

**9.** $26x - 5$

**10.** $48x + 56$

**11.** $15x - 14$

**12.** $20x - 100$

**13.** $7x + 35$

**14.** $7x + 17$

**15.** $9x - 63$

**16.** $39x + 13$

**17.** $8x + 15$

**18.** $18x - 12$

**19.** The area of a rectangular sandbox is $(5x + 40)$ square feet. Factor $5x + 40$ to find possible dimensions of the sandbox.

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# Lesson 5 Homework Practice

## *Factoring Linear Expressions*

**Find the GCF of each pair of monomials.**

**1.** 20, $45x$

**2.** $15r$, 25

**3.** $8xy$, $14x$

**4.** $30w$, $70w$

**5.** $4st$, $12s$

**6.** $11gh$, $33g$

**7.** $16mn$, $24m$

**8.** $25f$, $60g$

**9.** $33c$, $55cd$

**10.** $50j$, $75jk$

**11.** $27cd$, $72cde$

**12.** $48t$, $60st$

**Factor each expression. If the expression cannot be factored, write *cannot be factored.* Use algebra tiles if needed.**

**13.** $4x + 12$

**14.** $8r - 14$

**15.** $5x + 35$

**16.** $7 + 14x$

**17.** $32x - 15$

**18.** $24 + 32x$

**19.** $6x - 9$

**20.** $48 + 24x$

**21.** $72 - 18x$

**22.** $25x + 14$

**23.** The rectangle shown below has a total area of $(4x + 36)$ square feet. Factor $4x + 36$.

| | |
|---|---|
| $4x$ | 36 |

**24.** The Art Club receives \$10 plus \$2 for every sculpture they sell for a fundraiser. The expression $2x + 10$ represents the amount the Art Club receives if they sell $x$ sculptures. Factor $2x + 10$.

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# Lesson 5 Problem-Solving Practice

## *Factoring Linear Expressions*

| | |
|---|---|
| **1.** A sidewalk has an area that can be represented by the expression $(8x + 24)$ square feet. Factor the expression $8x + 24$. | **2.** The cost of renting a speedboat can be represented by the expression $50x + 250$, where $x$ is the number of hours it is rented. Factor the expression $50x + 250$. |
| **3.** The rectangle shown below has an area of $(28x + 49)$ square inches. Factor the expression $28x + 49$. | **4.** Four friends went to a concert and paid \$12 total for parking and $\$x$ per ticket. The expression $\$4x + \$12$ represents the total cost paid of all four friends. Factor $4x + 12$. |
| **5.** Marisa has \$40 in her savings account and plans to save $x$ dollars each month for 5 months. The expression $5x + 40$ represents the total amount in the account in dollars after 5 months. Factor the expression $5x + 40$. | **6.** A square picture frame has a perimeter of $(20x + 32)$ inches. What is the length of one side of the picture frame? |

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