

**Lesson 8 Skills Practice****Factor Linear Expressions**

Factor each expression. If the expression cannot be factored, write *cannot be factored*.

1.  $17x + 34$   $17(x + 2)$

2.  $10x + 25$   $5(2x + 5)$

5.  $38x - 12$   $2(19x - 6)$

6.  $28x + 15$  **cannot be factored**

9.  $26x - 5$  **cannot be factored**

10.  $48x + 56$   $\downarrow$   $8(6x + 7)$   
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13.  $7x + 35$   $7(x + 5)$

14.  $7x + 17$  **cannot be factored**

17.  $8x + 15$  **cannot be factored**

18.  $18x - 12$   $6(3x - 2)$

21. The area of a rectangular sandbox is  $(5x + 40)$  feet. Factor  $5x + 40$  to find possible dimensions of the sandbox.  $5(x + 8)$  ft

$$\begin{array}{|c|c|} \hline 1 & 6 \\ \hline \end{array} \quad 1 \times 6 = 6$$

$$\begin{array}{|c|c|} \hline 5 & x+8 \\ \hline \end{array} \quad 5(x+8)$$

$$\begin{array}{|c|c|} \hline 3 & 2 \\ \hline \end{array} \quad 3 \times 2 = 6$$

9.  $26x - 5$

$$\begin{array}{ccc} 1 & \swarrow & 5 \\ 2 & 13 & \\ \text{CANNOT BE} & & \text{FACTORED} \\ \text{FACTORED} & & \end{array}$$

$$\begin{array}{ccc} 4 & & 4 \\ & \swarrow & \swarrow \\ 2 & 2 & 1 \\ & \swarrow & \swarrow \\ 1 & 2 & 1 \\ 48 = 4 \cdot 12 & & \\ 48 = 2 \cdot 2 \cdot 3 \cdot 4 & & \\ 48 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 3 & & \\ \uparrow \uparrow \uparrow \uparrow & & \end{array}$$

$$\begin{array}{ccc} 56 & = & 8 \cdot 7 \\ 56 & = & 4 \cdot 2 \cdot 7 \\ 56 & = & 2 \cdot 2 \cdot 2 \cdot 7 \\ \uparrow \uparrow \uparrow & & \end{array}$$