

# DAY 5

## Answers to Factoring out the GCF

- |                                   |                                |                              |                           |
|-----------------------------------|--------------------------------|------------------------------|---------------------------|
| 1) $4xy(2 + y)$                   | 2) $9m^2(m - 1)$               | 3) $7xy^2z(2x + 3z)$         | 4) $5ab^2c^2(4bc^2d - 1)$ |
| 5) $3wt^2(4w^2 - 3 + 5wt)$        | 6) $8p^2q(-2pq + 3q^2 - 4p^2)$ | 7) $9y^2z^2(1 - 9y - 10z^2)$ |                           |
| 8) $4t^2(9t^3 + 10t^2 - 40t - 5)$ | 9) $x(8 - x)$                  | 10) $3y^2(3 - y)$            |                           |
| 11) $(c - d)(2 + w)$              | 12) $(p + z)(x + 6)$           | 13) $(y + 2)(3a + 4b)$       | 14) $(m + 10)(bc - 5)$    |
| 15) $(y - 3)(x - n)$              | 16) $(q - 8)(2p - 5w)$         | 17) $(d - 12)(8xy + 9z)$     |                           |
| 18) $(n - 14)(15a - 28b)$         | 19) $(a - 9)(7wx + 10b)$       | 20) $(x - y)(32x + 17y)$     |                           |

DAY 5

Date: \_\_\_\_\_

Name: \_\_\_\_\_

**Common Factoring**

2. Find the greatest common factor. Then, write the binomial in factored form.

a)  $3x + 15$

b)  $4x^2 + 8x$

c)  $5x^2 - 10x$

d)  $-7x^3 + 21x$

ⓐ  $3(x+5)$

ⓑ  $4x(x+2)$

ⓒ  $5x(x-2)$

ⓓ  $-7x(x^2-3)$

3. Factor each polynomial.

a)  $3x^2 - 12x + 18$

b)  $-10x^2 + 20x - 30$

c)  $-9x^2 - 3x + 9$

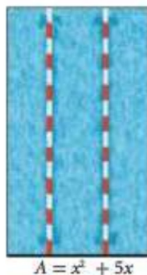
d)  $4x^2 - 6x + 8$

ⓐ  $3(x^2 - 4x + 6)$    ⓑ  $-10(x^2 - 2x + 3)$

ⓒ  $-3(3x^2 + x - 3)$    ⓓ  $2(2x^2 - 3x + 4)$

7. A swimming pool has the area shown.

- a) Factor completely the expression representing the area to determine the length and the width of the swimming pool.
- b) Find the actual measures of its sides if  $x = 2$  m.
- c) Find the perimeter of the pool.



a)  $A = x(x+5)$   
 $\therefore L = x+5$   
 $W = x$

b)  $L = 2+5 = 7$  m  
 $W = 2$  m

c)  $P = 2L + 2W$   
 $P = 2(7) + 2(2)$   
 $= 14 + 4$   
 $= 18$  m

8. Find the dimensions of each rectangle.

a)  $A = 21x^2 + 3x = 3x(7x+1)$   
 $\therefore L = 7x+1$   
 $W = 3x$

b)  $A = 2x^2 + 18x = 2x(x+9)$   
 $\therefore L = 2x$   
 $W = x+9$