

## Prime Factorization, LCM, and GCF

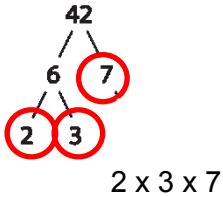
### *Mixed Review*

**Prime Factorization** - Use division to break a composite number into prime factors.

**Least Common Multiple** - The smallest common number in a set of multiples.

**Greatest Common Factor** - The highest number that divides exactly into two or more numbers.

**A.** Prime factors of 42.



**B.** LCM of 4 and 7.

4	4, 8, 12, 16, 20, 24, <span style="border: 1px solid red; border-radius: 50%; padding: 2px;">28</span>
7	7, 14, 21, <span style="border: 1px solid red; border-radius: 50%; padding: 2px;">28</span>

**C.** GCF of 12 and 18.

12	1, 2, 3, 4, <span style="border: 1px solid red; border-radius: 50%; padding: 2px;">6</span> , 12
18	1, 2, 3, <span style="border: 1px solid red; border-radius: 50%; padding: 2px;">6</span> , 9, 18

- Directions: Complete the problems and answer the riddle. Show work on all problems.

**What kind of coat can only be put on when wet?**

<b>F.</b> LCM of 7, 12	<b>T.</b> Prime Factors of 28	<b>A.</b> GCF of 16, 18	<b>C.</b> Prime Factors of 36
<b>T.</b> GCF of 30, 40	<b>G.</b> LCM of 8, 20	<b>N.</b> Prime Factors of 40	<b>B.</b> GCF of 18, 30
<b>E.</b> LCM of 3, 8, 6	<b>O.</b> GCF of 9, 24	<b>I.</b> LCM of 10, 12	<b>N.</b> Prime Factors of 80
<b>L.</b> LCM of 8, 30	<b>O.</b> Prime Factors of 70	<b>A.</b> GCF of 15, 45	<b>P.</b> LCM of 3, 6, 9

### Answer Key

\_\_\_\_ =  $2^2 \times 3^2$   
 \_\_\_\_ = 3  
 \_\_\_\_ = 2  
 \_\_\_\_ = 10  
 \_\_\_\_ =  $2 \times 5 \times 7$   
 \_\_\_\_ = 84  
 \_\_\_\_ = 18  
 \_\_\_\_ = 15  
 \_\_\_\_ = 60  
 \_\_\_\_ =  $2^4 \times 5$   
 \_\_\_\_ =  $2^2 \times 7$

## Prime Factorization, LCM, and GCF

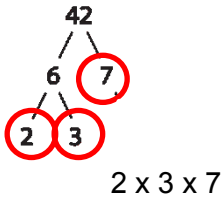
### Mixed Review

**Prime Factorization** - Use division to break a composite number into prime factors.

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A. Prime factors of 42.



B. LCM of 4 and 7.

4	4, 8, 12, 16, 20, 24, 28
7	7, 14, 21, 28

C. GCF of 12 and 18.

12	1, 2, 3, 4, 6, 12
18	1, 2, 3, 6, 9, 18

- Directions:** Complete the problems and answer the riddle. Show work on all problems.

**What kind of coat can only be put on when wet?**

### Answer Key

C =  $2^2 \times 3^2$

O = 3

A = 2

T = 10

O =  $2 \times 5 \times 7$

F = 84

P = 18

A = 15

I = 60

N =  $2^4 \times 5$

T =  $2^2 \times 7$

<b>F.</b> LCM of 7, 12  <b>84</b>	<b>T.</b> Prime Factors of 28  <b><math>2^2 \times 7</math></b>	<b>A.</b> GCF of 16, 18  <b>2</b>	<b>C.</b> Prime Factors of 36  <b><math>2^2 \times 3^2</math></b>
<b>T.</b> GCF of 30, 40  <b>10</b>	<b>G.</b> LCM of 8, 20  <b>40</b>	<b>N.</b> Prime Factors of 40  <b><math>2^3 \times 5</math></b>	<b>B.</b> GCF of 18, 30  <b>6</b>
<b>E.</b> LCM of 3, 8, 6  <b>24</b>	<b>O.</b> GCF of 9, 24  <b>3</b>	<b>I.</b> LCM of 10, 12  <b>60</b>	<b>N.</b> Prime Factors of 80  <b><math>2^4 \times 5</math></b>
<b>L.</b> LCM of 8, 30  <b>120</b>	<b>O.</b> Prime Factors of 70  <b><math>2 \times 5 \times 7</math></b>	<b>A.</b> GCF of 15, 45  <b>15</b>	<b>P.</b> LCM of 3, 6, 9  <b>18</b>