

# Fostering inclusion and diversity 3

Areas covered:

- Multiples
- Divisors
- Prime numbers
- Least common multiples
- Greatest common divisors

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More reinforcement and extension worksheets are available on the website.

Name and surnames: .....

Year: ..... Date: .....

1. Look at the following numbers and follow the instructions.

13                      2                      3                      16                      4  
8                      12                      10                      7                      6

- 1 Circle all the multiples of 2 in red.
- 2 Circle all the divisors of 30 in blue.
- 3 Circle all the prime numbers in black.

2. Complete the following sentences using the words *multiple* or *divisor*.

- 1 25 is a ..... of 5.
- 2 5 is a ..... of 25.
- 3 2 is a ..... of any number that ends in 8.
- 4 Any number that ends in 0 is a ..... of 5.
- 5 10 is a ..... of 5 and a ..... of 30.

3. Factorize the following numbers using the elements from the list.

$2^2$     3    5    7    2    11     $2^3$

- |        |        |        |
|--------|--------|--------|
| 1 30 = | 3 28 = | 5 90 = |
| 2 66 = | 4 40 = | 6 20 = |

4. Choose the right procedure (in italics) to solve the problems and find the solutions.

- 1 An asteroid (A) enters the Solar System once every 36 years. Another asteroid (B) enters the Solar System once every 54 years. This year we could see both of them next to Saturn. When will they meet again in our Solar System?

Procedure: first you have to find the ***least common multiple*** / ***greatest common divisor*** of 36 and 54.

- 2 This summer I spent some time in the mountains, and then I travelled to France with my parents. I took a lot of pictures: 96 in the mountains and 48 in France. I want to organise them in photo albums. I want the albums to have the same number of photos but I want to buy as few of them as possible. How many photos will each album have? How many albums will I need for the photos of the mountains? How many albums will I need for the photos of France?

Procedure: first you have to find the ***least common multiple*** / ***greatest common divisor*** of 96 and 48.

5. Match elements from the three columns to make sentences.

312		26, 4 and 8.
12		48 and 16.
66	... is the least common multiple of...	41 and 7.
16		6, 12 and 2.
1	... is the greatest common divisor of...	22 and 33.
12		24 and 36.
104		39 and 24.

Name and surnames: .....

Year: ..... Date: .....

1. Look at the following numbers and follow the instructions.

5                      2                      3                      16                      60  
8                      28                      10                      7                      6

- 1 Circle all the multiples of 4 in red.
- 2 Circle all the divisors of 30 in blue.
- 3 Circle all the prime numbers in black.

2. Complete the following sentences using the words *multiple* or *divisor*.

- 1 25 is a ..... of 5.
- 2 5 is a ..... of 25.
- 3 2 is a ..... of any number that ends in 8.
- 4 Any number that ends in 0 is a ..... of 5.
- 5 10 is a ..... of 5 and a ..... of 30.

3. Factorize the following numbers using the elements from the list.

$2^2$     3    5     $7^2$     2    11     $2^3$

- |   |      |   |       |   |       |
|---|------|---|-------|---|-------|
| 1 | 30 = | 3 | 196 = | 5 | 90 =  |
| 2 | 66 = | 4 | 216 = | 6 | 110 = |

4. Solve the problems.

- 1 An asteroid (A) enters the Solar System once every 36 years. Another asteroid (B) enters the Solar System once every 54 years. This year we could see both of them next to Saturn. When will they meet again in our Solar System?
- 2 This summer I spent some time in the mountains, then I travelled to France with my parents, and finally I spent some time with my cousins in Madrid. I took a lot of pictures: 96 in the mountains, 48 in France, and 16 with my cousins. I want to organise them in photo albums. I want the albums to have the same number of photos but I want to buy as few of them as possible. How many photos will each album have? How many albums will I need for the photos of the mountains? How many albums will I need for the photos of France? How many albums will I need for the photos with my cousins?

5. Match elements from the three columns to make sentences.

1716		26, 4 and 8.
15		98, 28 and 70.
630	... is the least common multiple of...	41, 7 and 50.
14		6, 12 and 2.
1	... is the greatest common divisor of...	18, 7 and 10.
12		90, 45 and 30.
104		11, 12 and 13.

Name and surnames: .....

Year: ..... Date: .....

1. Observa los siguientes números y sigue las instrucciones a continuación.

13                      2                      3                      16                      4  
8                      12                      10                      7                      6

- 1 Circle all the multiples of 2 in red.
- 2 Circle all the divisors of 30 in blue.
- 3 Circle all the prime numbers in black.

2. Completa las frases utilizando las palabras *múltiple* y *divisor*.

- 1 25 is a ..... of 5.
- 2 5 is a ..... of 25.
- 3 2 is a ..... of any number that ends in 8.
- 4 Any number that ends in 0 is a ..... of 5.
- 5 10 is a ..... of 5 and a ..... of 30.

3. Factoriza los siguientes números utilizando los elementos de la lista.

$2^2$       3      5      7      2      11       $2^3$

- |   |      |   |      |   |      |
|---|------|---|------|---|------|
| 1 | 30 = | 3 | 28 = | 5 | 90 = |
| 2 | 66 = | 4 | 40 = | 6 | 20 = |

4. Escoge el procedimiento apropiado (en cursiva) y resuelve los problemas.

- 1 An asteroid (A) enters the Solar System once every 36 years. Another asteroid (B) enters the Solar System once every 54 years. This year we could see both of them next to Saturn. When will they meet again in our Solar System?

Procedure: first you have to find the ***least common multiple / greatest common divisor*** of 36 and 54.

- 2 This summer I spent some time in the mountains, and then I travelled to France with my parents. I took a lot of pictures: 96 in the mountains and 48 in France. I want to organise them in photo albums. I want the albums to have the same number of photos but I want to buy as few of them as possible. How many photos will each album have? How many albums will I need for the photos of the mountains? How many albums will I need for the photos of France?

Procedure: first you have to find the ***least common multiple / greatest common divisor*** of 96 and 48.

5. Une los elementos de las distintas columnas para formar frases.

312		26, 4 and 8.
12		48 and 16.
66	... is the least common multiple of...	41 and 7.
16		6, 12 and 2.
1	... is the greatest common divisor of...	22 and 33.
12		24 and 36.
104		39 and 24.

Name and surnames: .....

Year: ..... Date: .....

1. Observa los siguientes números y sigue las instrucciones a continuación.

5                      2                      3                      16                      60  
8                      28                      10                      7                      6

- 1 Circle all the multiples of 4 in red.
- 2 Circle all the divisors of 30 in blue.
- 3 Circle all the prime numbers in black.

2. Completa las frases utilizando las palabras *multiple* y *divisor*.

- 1 25 is a ..... of 5.
- 2 5 is a ..... of 25.
- 3 2 is a ..... of any number that ends in 8.
- 4 Any number that ends in 0 is a ..... of 5.
- 5 10 is a ..... of 5 and a ..... of 30.

3. Factoriza los siguientes números utilizando los elementos de la lista.

$2^2$     3    5     $7^2$     2    11     $2^3$

- |   |      |   |       |   |       |
|---|------|---|-------|---|-------|
| 1 | 30 = | 3 | 196 = | 5 | 90 =  |
| 2 | 66 = | 4 | 216 = | 6 | 110 = |

4. Resuelve los siguientes problemas.

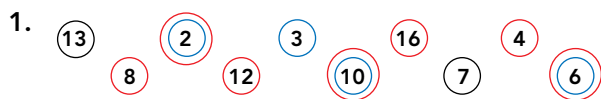
- 1 An asteroid (A) enters the Solar System once every 36 years. Another asteroid (B) enters the Solar System once every 54 years. This year we could see both of them next to Saturn. When will they meet again in our Solar System?
- 2 This summer I spent some time in the mountains, then I travelled to France with my parents, and finally I spent some time with my cousins in Madrid. I took a lot of pictures: 96 in the mountains, 48 in France, and 16 with my cousins. I want to organise them in photo albums. I want the albums to have the same number of photos but I want to buy as few of them as possible. How many photos will each album have? How many albums will I need for the photos of the mountains? How many albums will I need for the photos of France? How many albums will I need for the photos with my cousins?

5. Une los elementos de las distintas columnas para formar frases.

1716		26, 4 and 8.
15		98, 28 and 70.
630	... is the least common multiple of...	41, 7 and 50.
14		6, 12 and 2.
1	... is the greatest common divisor of...	18, 7 and 10.
12		90, 45 and 30.
104		11, 12 and 13.

3

Worksheet A and C



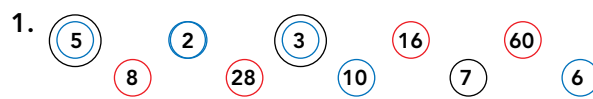
2. 1 multiple
- 2 divisor
- 3 divisor
- 4 multiple
- 5 multiple - divisor

3. 1  $30 = 5 \cdot 3 \cdot 2$
- 2  $66 = 11 \cdot 3 \cdot 2$
- 3  $28 = 7 \cdot 2^2$
- 4  $40 = 5 \cdot 2^3$
- 5  $90 = 5 \cdot 3^2 \cdot 2$
- 6  $20 = 5 \cdot 2$

4. 1 Least common multiple. 108 years from now.
- 2 Greatest common divisor. 16 photos / album. 6 albums. 3 albums.

5.
  - 312 is the least common multiple of 39 and 24.
  - 12 is the greatest common divisor of 24 and 36.
  - 66 is the least common multiple of 22 and 33.
  - 16 is the greatest common divisor of 48 and 16.
  - 1 is the greatest common divisor of 41 and 7.
  - 12 is the least common multiple of 6, 12 and 2.
  - 104 is the least common multiple of 26, 4 and 8.

Worksheet B and D



2. 1 multiple
- 2 divisor
- 3 divisor
- 4 multiple
- 5 multiple - divisor

3. 1  $30 = 5 \cdot 3 \cdot 2$
- 2  $66 = 11 \cdot 3 \cdot 2$
- 3  $28 = 7 \cdot 2^2$
- 4  $40 = 5 \cdot 2^3$
- 5  $90 = 5 \cdot 3^2 \cdot 2$
- 6  $20 = 5 \cdot 2$

4. 1 108 years from now.
- 2 16 photos / album. 6 albums. 3 albums. 1 album.

5.
  - 1716 is the least common multiple of 11, 12 and 13.
  - 15 is the greatest common divisor of 90, 45 and 30.
  - 630 is the least common multiple of 18, 7 and 10.
  - 14 is the greatest common divisor of 98, 28 and 70.
  - 1 is the greatest common divisor of 41, 7 and 50.
  - 12 is the least common multiple of 6, 12 and 2.
  - 104 is the least common multiple of 26, 4 and 8.