

Number Theory

Skill 5 - 10C

Common Factors and GCF

Answer to test question 10C.

Directions: List the factors of 36 and 54. List the common factors of 36 and 54. Find the greatest common factor of 36 and 54.

The factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18 and 36.

The factors of 54 are 1, 2, 3, 6, 9, 18, 27 and 54.

The common factors are 1, 2, 3, 6, 9, 18 The greatest common factor of 36 and 54 is 18.

A factor is a number multiplied by another number to get a product. (also a factor is a number that will go into another number evenly)

$$\begin{array}{c}
 2 \times 3 = 6 \\
 \swarrow \quad \searrow \\
 \text{factor} \quad \text{factor}
 \end{array}$$

The factors of 6 are 1, 2, 3 and 6 because $1 \times 6 = 6$ and $2 \times 3 = 6$

List the factors. List the common factors. Find the greatest common factor. (The first one has been done for you and help on question number 2)

<p>1. 12 and 21</p> <p>The factors of 12 are 1, 2, 3, 4, 6, 12</p> <p>The factors of 21 are 1, 3, 7, 21</p> <p>The common factors are 1 and 3</p> <p>The GCF of 12 and 21 is 3</p>	<p>2. 12 and 30</p> <p>The factors of 12 are 1, 2, 3, 4, 6, 12</p> <p>The factors of 30 are 1, 2, 3, 5, 6, 10, 15, and 30</p> <p>The common factors are 1, 2, 3, 6</p> <p>The GCF is _____ ?</p>	<p>3. 18 and 36</p> <p>The GCF is _____ ?</p>
<p>4. 18 and 45</p> <p>The GCF is _____</p>	<p>5. 9 and 21</p> <p>The GCF is _____</p>	<p>6. 12 and 18</p> <p>The GCF is _____</p>
<p>7. 25 and 35</p> <p>The GCF is _____</p>	<p>8. 32 and 24</p> <p>The GCF is _____</p>	<p>9. 20 and 35</p> <p>The GCF is _____</p>

Number Theory Skill 5 - 10C

Common Factors and GCF

Directions: List the factors. List the common factors. Find the greatest common factor.

<p>10. 26 and 12</p> <p style="text-align: center;">The GCF is _____</p>	<p>11. 9 and 21</p> <p style="text-align: center;">The GCF is _____</p>	<p>12. 12 and 18</p> <p style="text-align: center;">The GCF is _____</p>
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<p>13. 13 and 17</p> <p style="text-align: center;">The GCF is _____</p>	<p>14. 28 and 30</p> <p style="text-align: center;">The GCF is _____</p>	<p>15. 8 and 20</p> <p style="text-align: center;">The GCF is _____</p>
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<p>16. 30 and 48</p> <p style="text-align: center;">The GCF is _____</p>	<p>17. 8 and 32</p> <p style="text-align: center;">The GCF is _____</p>	<p>18. 11 and 15</p> <p style="text-align: center;">The GCF is _____</p>
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<p>19. 6, 8 and 12</p> <p style="text-align: center;">The GCF is _____</p>	<p>20. 4, 8 and 16</p> <p style="text-align: center;">The GCF is _____</p>	<p>21. 8, 16 and 20</p> <p style="text-align: center;">The GCF is _____</p>
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1. GCF is 3	2. GCF is 6
3. 18 and 36 the factors of 18 are 1 2 3 6 9 18 the factors of 36 are 1 2 3 4 6 9 12 18 36 the common factors are 1 2 3 6 9 18 the GCF is 18	4. 18 and 45 the factors of 18 are 1 2 3 6 9 18 the factors of 45 are 1 3 5 9 15 45 the common factors are 1 3 9 the GCF is 9
5. 9 and 21 the factors of 9 are 1 3 9 the factors of 21 are 1 3 7 21 the common factors are 1 3 the GCF is 3	6. 12 and 18 the factors of 12 are 1 2 3 4 6 12 the factors of 18 are 1 2 3 6 9 18 the common factors are 1 2 3 6 the GCF is 6
7. 25 and 35 the factors of 25 are 1 5 25 the factors of 35 are 1 5 7 35 the common factors are 1 5 the GCF is 5	8. 32 and 24 the factors of 32 are 1 2 4 8 16 32 the factors of 24 are 1 2 3 4 6 8 12 24 the common factors are 1 2 4 8 the GCF is 8
9. 20 and 35 the factors of 20 are 1 2 4 5 10 20 the factors of 35 are 1 5 7 35 the common factors are 1 5 the GCF is 5	10. 26 and 12 the factors of 26 are 1 2 13 26 the factors of 12 are 1 2 3 4 6 12 the common factors are 1 2 the GCF is 2
11. 9 and 21 the factors of 9 are 1 3 9 the factors of 21 are 1 3 7 21 the common factors are 1 3 the GCF is 3	12. 24 and 18 the factors of 24 are 1 2 3 4 6 8 12 24 the factors of 18 are 1 2 3 6 9 18 the common factors are 1 2 3 6 the GCF is 6
13. 13 and 17 the factors of 13 are 1 13 the factors of 17 are 1 17 the common factor is 1 the GCF is 1	14. 28 and 30 the factors of 28 are 1 2 4 7 14 28 the factors of 30 are 1 2 3 5 6 10 15 30 the common factors are 1 2 the GCF is 2
15. 8 and 20 the factors of 8 are 1 2 4 8 the factors of 20 are 1 2 4 5 10 20 the common factors are 1 2 4 the GCF is 4	16. 30 and 48 the factors of 30 are 1 2 3 5 6 10 15 30 the factors of 48 are 1 2 3 4 6 8 12 16 24 48 the common factors are 1 2 3 6 the GCF is 6
17. 8 and 32 the factors of 8 are 1 2 4 8 the factors of 32 are 1 2 4 8 16 32 the common factors are 1 2 4 8 the GCF is 8	18. 11 and 15 the factors of 11 are 1 and 11 the factors of 15 are 1 3 5 15 the common factor is 1 the GCF is 1
19. 6, 8 and 12 the factors of 6 are 1 2 3 6 the factors of 8 are 1 2 4 8 the factors of 12 are 1 2 3 4 6 12 the common factors are 1 2 the GCF is 2	20. 4, 8 and 16 the factors of 4 are 1 2 4 the factors of 8 are 1 2 4 8 the factors of 16 are 1 2 4 8 16 the common factors are 1 2 4 the GCF is 4
21. 8 16 and 20 the factors of 8 are 1 2 4 8 the factors of 16 are 1 2 4 8 16 the factors of 20 are 1 2 4 5 10 20 the common factors are 1 2 4 the GCF is 4	