

Numbers

Prime Factors, Highest Common Factors, and Lowest Common Multiples

1. Find all the prime factors of the following numbers using the ladder method:

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|--------|--------|--------|
| a) 179 | b) 276 | c) 186 |
| d) 147 | e) 81 | f) 171 |
| g) 64 | h) 102 | i) 22 |
| j) 214 | k) 264 | l) 159 |
| m) 185 | n) 153 | o) 162 |
| p) 256 | q) 268 | r) 127 |
| s) 161 | t) 300 | u) 249 |

2. Find all the prime factors of the following numbers using the tree/branch method:

- | | | |
|--------|--------|--------|
| a) 291 | b) 60 | c) 90 |
| d) 174 | e) 81 | f) 97 |
| g) 200 | h) 16 | i) 185 |
| j) 275 | k) 88 | l) 143 |
| m) 95 | n) 63 | o) 36 |
| p) 264 | q) 246 | r) 70 |
| s) 228 | t) 180 | u) 300 |

3. Find the highest common factor (or greatest common divisor) for each of the pairs of numbers.

- | | | |
|----------------|----------------|----------------|
| a) 171 and 152 | b) 23 and 42 | c) 105 and 77 |
| d) 221 and 247 | e) 96 and 224 | f) 114 and 285 |
| g) 44 and 121 | h) 278 and 780 | i) 110 and 88 |
| j) 216 and 36 | k) 75 and 90 | l) 65 and 104 |
| m) 252 and 210 | n) 175 and 200 | o) 172 and 258 |

4. Find the highest common factor (or greatest common divisor) for each of these sets of numbers

- | | |
|---------------------|---------------------|
| a) 217, 147 and 126 | b) 195, 390 and 520 |
| c) 50, 36 and 100 | d) 22, 33 and 88 |
| e) 16, 24 and 48 | f) 91, 343 and 210 |
| g) 228, 285 and 399 | h) 60, 144 and 336 |
| i) 255, 102 and 306 | j) 290, 580 and 145 |

5. Find the lowest common multiple for each of these pairs of numbers

- | | | |
|----------------|----------------|----------------|
| a) 171 and 152 | b) 23 and 42 | c) 105 and 77 |
| d) 221 and 247 | e) 96 and 224 | f) 114 and 285 |
| g) 44 and 121 | h) 278 and 780 | i) 110 and 88 |
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