

Worksheet

04/16/2019

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Problem quickname: 4978

1)Quick:
4978

Find the value requested, the greatest common divisor (gcd) or the least common multiple (lcm).

- a) The lcm of 3 and 63 is 63, because when looking at the multiples we see:
Multiples of 3: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63; Multiples of 63: 63. The number 63 is the first multiple shared by both numbers.
- b) What is the gcd of 54 and 72? It is 18, because $D_{54} = \{1, 2, 3, 6, 9, 18, 27, 54\}$, $D_{72} = \{1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72\}$. The number 18 is the greatest number that is in both sets of divisors.
- c) The lcm of 4 and 19 is 76, because when looking at the multiples we see:
Multiples of 4: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76;
Multiples of 19: 19, 38, 57, 76. The number 76 is the first multiple shared by both numbers.
- d) The lcm of 4 and 5 is 20, because when looking at the multiples we see: Multiples of 4: 4, 8, 12, 16, 20; Multiples of 5: 5, 10, 15, 20. The number 20 is the first multiple shared by both numbers.
- e) The lcm of 2 and 33 is 66, because when looking at the multiples we see:
Multiples of 2: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66; Multiples of 33: 33, 66. The number 66 is the first multiple shared by both numbers.
- f) What is the gcd of 46 and 69? It is 23, because $D_{46} = \{1, 2, 23, 46\}$, $D_{69} = \{1, 3, 23, 69\}$. The number 23 is the greatest number that is in both sets of divisors.
- g) The lcm of 6 and 27 is 54, because when looking at the multiples we see:
Multiples of 6: 6, 12, 18, 24, 30, 36, 42, 48, 54; Multiples of 27: 27, 54. The number 54 is the first multiple shared by both numbers.
- h) The lcm of 3 and 27 is 27, because when looking at the multiples we see:
Multiples of 3: 3, 6, 9, 12, 15, 18, 21, 24, 27; Multiples of 27: 27. The number 27 is the first multiple shared by both numbers.
- i) The lcm of 3 and 10 is 30, because when looking at the multiples we see:
Multiples of 3: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30; Multiples of 10: 10, 20, 30. The number 30 is the first multiple shared by both numbers.

- j) What is the gcd of 44 and 66? It is 22, because $D_{44} = \{1,2,4,11,22,44\}$, $D_{66} = \{1,2,3,6,11,22,33,66\}$. The number 22 is the greatest number that is in both sets of divisors.

2)

Find the value requested, the greatest common divisor (gcd) or the least common multiple (lcm).

Quick:
4978

- a) What is the gcd of 46 and 69? It is 23, because $D_{46} = \{1,2,23,46\}$, $D_{69} = \{1,3,23,69\}$. The number 23 is the greatest number that is in both sets of divisors.
- b) The lcm of 4 and 56 is 56, because when looking at the multiples we see: Multiples of 4: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56; Multiples of 56: 56. The number 56 is the first multiple shared by both numbers.
- c) What is the gcd of 42 and 63? It is 21, because $D_{42} = \{1,2,3,6,7,14,21,42\}$, $D_{63} = \{1,3,7,9,21,63\}$. The number 21 is the greatest number that is in both sets of divisors.
- d) What is the gcd of 66 and 88? It is 22, because $D_{66} = \{1,2,3,6,11,22,33,66\}$, $D_{88} = \{1,2,4,8,11,22,44,88\}$. The number 22 is the greatest number that is in both sets of divisors.
- e) What is the gcd of 60 and 80? It is 20, because $D_{60} = \{1,2,3,4,5,6,10,12,15,20,30,60\}$, $D_{80} = \{1,2,4,5,8,10,16,20,40,80\}$. The number 20 is the greatest number that is in both sets of divisors.
- f) What is the gcd of 54 and 81? It is 27, because $D_{54} = \{1,2,3,6,9,18,27,54\}$, $D_{81} = \{1,3,9,27,81\}$. The number 27 is the greatest number that is in both sets of divisors.
- g) What is the gcd of 64 and 96? It is 32, because $D_{64} = \{1,2,4,8,16,32,64\}$, $D_{96} = \{1,2,3,4,6,8,12,16,24,32,48,96\}$. The number 32 is the greatest number that is in both sets of divisors.
- h) What is the gcd of 75 and 100? It is 25, because $D_{75} = \{1,3,5,15,25,75\}$, $D_{100} = \{1,2,4,5,10,20,25,50,100\}$. The number 25 is the greatest number that is in both sets of divisors.

3)

Find the value requested.

Quick:
4978

- a) What is the gcd of 46 and 69? It is 23, because $D_{46} = \{1,2,23,46\}$, $D_{69} = \{1,3,23,69\}$. The number 23 is the greatest number that is in both sets of divisors.
- b) What is the gcd of 63 and 84? It is 21, because $D_{63} = \{1,3,7,9,21,63\}$, $D_{84} = \{1,2,3,4,6,7,12,14,21,28,42,84\}$. The number 21 is the greatest number that is in both sets of divisors.

- c) What is the gcd of 75 and 100? It is 25, because $D_{75} = \{1,3,5,15,25,75\}$, $D_{100} = \{1,2,4,5,10,20,25,50,100\}$. The number 25 is the greatest number that is in both sets of divisors.
- d) What is the gcd of 54 and 81? It is 27, because $D_{54} = \{1,2,3,6,9,18,27,54\}$, $D_{81} = \{1,3,9,27,81\}$. The number 27 is the greatest number that is in both sets of divisors.
- e) What is the gcd of 62 and 93? It is 31, because $D_{62} = \{1,2,31,62\}$, $D_{93} = \{1,3,31,93\}$. The number 31 is the greatest number that is in both sets of divisors.
- f) What is the gcd of 58 and 87? It is 29, because $D_{58} = \{1,2,29,58\}$, $D_{87} = \{1,3,29,87\}$. The number 29 is the greatest number that is in both sets of divisors.
- g) What is the gcd of 52 and 78? It is 26, because $D_{52} = \{1,2,4,13,26,52\}$, $D_{78} = \{1,2,3,6,13,26,39,78\}$. The number 26 is the greatest number that is in both sets of divisors.
- h) What is the gcd of 66 and 88? It is 22, because $D_{66} = \{1,2,3,6,11,22,33,66\}$, $D_{88} = \{1,2,4,8,11,22,44,88\}$. The number 22 is the greatest number that is in both sets of divisors.

4)

Find the value requested, the least common multiple (lcm).

Quick:
4978

- a) The lcm of 8 and 21 is 168, because when looking at the multiples we see:
Multiples of 8: 8, 16, 24, 32, 40, 48, 56, 64, 72, 80, 88, 96, 104, 112, 120, 128, 136, 144, 152, 160, 168; Multiples of 21: 21, 42, 63, 84, 105, 126, 147, 168. The number 168 is the first multiple shared by both numbers.
- b) The lcm of 4 and 35 is 140, because when looking at the multiples we see:
Multiples of 4: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84, 88, 92, 96, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140; Multiples of 35: 35, 70, 105, 140. The number 140 is the first multiple shared by both numbers.
- c) The lcm of 2 and 116 is 116, because when looking at the multiples we see:
Multiples of 2: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116; Multiples of 116: 116. The number 116 is the first multiple shared by both numbers.
- d) The lcm of 2 and 116 is 116, because when looking at the multiples we see:
Multiples of 2: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116; Multiples of 116: 116. The number 116 is the first multiple shared by both numbers.

- e) The lcm of 6 and 23 is 138, because when looking at the multiples we see:
Multiples of 6: 6, 12, 18, 24, 30, 36, 42, 48, 54, 60, 66, 72, 78, 84, 90, 96, 102, 108, 114, 120, 126, 132, 138; Multiples of 23: 23, 46, 69, 92, 115, 138. The number 138 is the first multiple shared by both numbers.
- f) The lcm of 4 and 11 is 44, because when looking at the multiples we see:
Multiples of 4: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44; Multiples of 11: 11, 22, 33, 44. The number 44 is the first multiple shared by both numbers.
- g) The lcm of 10 and 36 is 180, because when looking at the multiples we see:
Multiples of 10: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180; Multiples of 36: 36, 72, 108, 144, 180. The number 180 is the first multiple shared by both numbers.
- h) The lcm of 8 and 22 is 88, because when looking at the multiples we see:
Multiples of 8: 8, 16, 24, 32, 40, 48, 56, 64, 72, 80, 88; Multiples of 22: 22, 44, 66, 88. The number 88 is the first multiple shared by both numbers.

Good Luck!