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Curt libarnes

A206

Instructions Upload a photo of your answer sheet showing your name and solution. (20 items x 2 points)

A. Determine if 1781 is divisible by 3, 6, 7, 8, and 9. (5 items x 2 points)

$$1781/3 = 593.666 \text{ (it is not divisible)}$$

$$1781/6 = 296.833 \text{ (it is not divisible)}$$

$$1781/7 = 254.428 \text{ (it is not divisible)}$$

$$1781/8 = 222.625 \text{ (it is not divisible)}$$

$$1781/9 = 197.888 \text{ (it is not divisible)}$$

**1781 is not divisible by 3, 6, 7, 8 and 9**

B. Determine if each of the following numbers is a prime or composite.

6. 828

**828 is a Composite Number** and can be factored by any of the following numbers.

All the factors of 828:

1, 2, 3, 4, 6, 9, 12, 18, 23, 36, 46, 69, 92, 138, 207, 276, 414, 828

7. 1666

**1666 is a Composite Number** and can be factored by any of the following numbers.

All the factors of 1666:

1, 2, 7, 14, 17, 34, 49, 98, 119, 238, 833, 1666

**1781 is a Composite Number** and can be factored by any of the following numbers.

All the factors of 1781:

1, 13, 137, 1781

9. 1125

**1125 is a Composite Number** and can be factored by any of the following numbers.

All the factors of 1125:

1, 3, 5, 9, 15, 25, 45, 75, 125, 225, 375, 1125

10. 107

**107 is a Prime Number.**

Curt libarnes

A206

Its only factors are 1 and 107.

C. Find the greatest common divisor of each of the following pairs of integers.

11. 60 and 100

The factors of 60 are:

1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, and 60

The factors of 100 are: 1, 2, 4, 5, 10, 20, 25, 50, and 100

**Then the greatest common factor is 20.**

12. 45 and 33

The factors of 33 are: 1, 3, 11, and 33

The factors of 45 are: 1, 3, 5, 9, 15, and 45

**Then the greatest common factor is 3**

13. 34 and 58

The factors of 34 are: 1, 2, 17, and 34

The factors of 58 are: 1, 2, 29, and 58

**Then the greatest common factor is 2**

14. 77 and 128

The factors of 77 are: 1, 7, 11, and 77

The factors of 128 are: 1, 2, 4, 8, 16, 32, 64, and 128

**Then the greatest common factor is 1.**

15. 98 and 273

The factors of 98 are: 1, 2, 7, 14, 49, and 98

The factors of 273 are: 1, 3, 7, 13, 21, 39, 91, and 273

**Then the greatest common factor is 7.**

D. Find the least common multiple of each of the following pairs of integers.

Curt libarnes

A206

16. 72 AND 108

Multiples of 72:

72, 144, 216, 288, 360

Multiples of 108:

108, 216, 324, 432

Therefore,

**LCM (72, 108) = 216**

17. 175 AND 245

Multiples of 175:

175, 350, 525, 700, 875, 1050, 1225, 1400, 1575

Multiples of 245: 245, 490, 735, 980, 1225, 1470, 1715

Therefore,

**LCM (175, 245) = 1225**

18. 150 AND 70

Multiples of 70:

70, 140, 210, 280, 350, 420, 490, 560, 630, 700, 770, 840, 910, 980, 1050, 1120, 1190

Multiples of 150:

150, 300, 450, 600, 750, 900, 1050, 1200, 1350

**Therefore, LCM (70, 150) = 1050**

19. 32 AND 27

Multiples of 27: 27, 54, 81, 108, 135, 162, 189, 216, 243, 270, 297, 324, 351, 378, 405, 432, 459, 486, 513, 540, 567, 594, 621, 648, 675, 702, 729, 756, 783, 810, 837, 864, 891, 918

Multiples of 32: 32, 64, 96, 128, 160, 192, 224, 256, 288, 320, 352, 384, 416, 448, 480, 512, 544, 576, 608, 640, 672, 704, 736, 768, 800, 832, 864, 896, 928

**Therefore, LCM (27, 32) = 864**

Curt libarnes  
A206

20. 540 AND 504

Multiples of 504:

504, 1008, 1512, 2016, 2520, 3024, 3528, 4032, 4536, 5040, 5544, 6048, 6552, 7056, 7560, 8064, 8568

Multiples of 540:

540, 1080, 1620, 2160, 2700, 3240, 3780, 4320, 4860, 5400, 5940, 6480, 7020, 7560, 8100, 8640

**Therefore, LCM (504, 540) = 7560**