Least Common Multiple

What are the multiples of 2?

2: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, ...

What are the multiples of 3?

3: 3, 6, 9, 12, 15, 18, 21, ...

6, 12, 18

Common multiples

The least common multiple of a set of numbers is the least number that is a common multiple of two or more numbers.

What is the least common multiple of 2 and 3?

6

Find the LCM of the following set of numbers:

1. 12 and 18

12: 12, 24, 36, 48

18: 18, 36

LCM: 36

2. 10, 15, 25

10: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150

15: 15, 30, 45, 60, 75, 90, 105, 120, 135, 150

25: 25, 50, 75, 100, 125, 150

LCM: 150

3. 10, 16, 18

18: 18, 36, 54, 72, 90, 108, 126, 144, 162, 180, 198, 216, 234, 252

16: 16, 32, 48, 64, 80, 96, 112, 128, 144, 160, 176, 192, 208, 224, 240

10: 10, 20, 30, . . .

2880

4. 4, 7

4: 4, 8, 12, 16, 20, 24, 28

7: 7, 14, 21, 28

28

Mailing labels are sold in packages of 16. Envelopes are sold in packages of 20. What is the least number of labels and envelopes you can buy so that there is one label for each envelope with none left over?

16: 16, 32, 48, 64, 80

20: 20, 40, 60, 80

LCM: 80 of each

80 ÷ 20 = 4 packs of envelopes

80 ÷ 16 = 5 packs of labels

Danny wants to promote his new business. He gave out a free pen to every 4th customer and a free pad of paper to every 7th customer. Which customer will be the first to get both a pen and a pad of paper?

7: 7, 14, 21, 28

4: 4, 8, 12, 16, 20, 24, 28

28th Customer

HW:
p39
#s 7-15

Jose is shopping for party supplies. He finds a package of 10 plates, a package of 16 napkins, and a package of 8 cups. What is the least number of packages of plates, napkins, and cups he can buy so that he has the same number of plates, napkins, and cups?

GCF = 80

8 packs of plates, 5 packs of napkins, and 10 packs of cups