MATH

Greatest common factor and least common multiple

Name _____ Date _____

I can find the GCF and the LCM of two numbers.

1 How it works

The greatest common factor (GCF) is the biggest factor two numbers share. List the factors of each and pick the biggest one in both lists. The least common multiple (LCM) is the smallest multiple they share. List multiples until one appears in both lists.

12: 1, 2, 3, 4, 6, 12
18: 1, 2, 3, 6, 9, 18
GCF = 6
4: 4, 8, 12 ...
6: 6, 12 ... **LCM = 12**

2 Find the greatest common factor (GCF)

1. **10 and 25** GCF ____
   Factors of 10: ____
   Factors of 25: ____

2. **8 and 12** GCF ____
   Factors of 8: ____
   Factors of 12: ____

3. **18 and 27** GCF ____
   Factors of 18: ____
   Factors of 27: ____

4. **9 and 12** GCF ____
   Factors of 9: ____
   Factors of 12: ____

How did I do? ☆ ☆ ☆

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Least common multiple

Name _____ Date _____

I can find the least common multiple of two numbers.

1 Find the least common multiple (LCM)

List, then match.

1 3 and 4 LCM ☐

Multiples of 3: ☐

Multiples of 4: ☐

2 2 and 7 LCM ☐

Multiples of 2: ☐

Multiples of 7: ☐

3 5 and 6 LCM ☐

Multiples of 5: ☐

Multiples of 6: ☐

4 6 and 9 LCM ☐

Multiples of 6: ☐

Multiples of 9: ☐

2 Mixed practice

GCF of 16 and 24 = ☐ GCF of 15 and 20 = ☐ LCM of 4 and 6 = ☐

LCM of 8 and 12 = ☐ GCF of 14 and 21 = ☐ LCM of 9 and 12 = ☐

How did I do? ☆ ☆ ☆

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GCF and LCM together

Name _____ Date _____

I can find the GCF and the LCM of the same two numbers.

1 Find the GCF and the LCM

Numbers	GCF	LCM
6 and 10		
12 and 16		
9 and 12		
6 and 8		
8 and 12		

2 Think about it

1. What is the GCF of 7 and 14?
2. What is the LCM of 5 and 10?
3. Two numbers have a GCF of 1. Give an example.
4. The GCF of two numbers is 6. One number is 12. What could the other be?

How did I do? ☆ ☆ ☆

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Word problems

Name _____ Date _____

I can use factors and multiples to solve problems.

1 Read, think, answer

Show your thinking in the box.

1 Zara has 12 apples and 18 oranges. Zara wants to make fruit baskets that are all the same, using all the fruit. What is the greatest number of baskets?

Answer:

2 The red bus comes every 4 minutes. The blue bus comes every 6 minutes. Both are here now. In how many minutes will they come together again?

Answer:

3 Plates come in packs of 8. Cups come in packs of 12. What is the smallest number of plates and cups you can buy to have the same number of each?

Answer:

4 Ali has 20 red stickers and 30 blue stickers to share equally among friends, with none left over. What is the greatest number of friends?

Answer:

How did I do? ☆ ☆ ☆

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FOR TEACHERS AND PARENTS

Answer key: greatest common factor and least common multiple

1 Page 1

1) 10: 1, 2, 5, 10. 25: 1, 5, 25. GCF = 5
2) 8: 1, 2, 4, 8. 12: 1, 2, 3, 4, 6, 12. GCF = 4
3) 18: 1, 2, 3, 6, 9, 18. 27: 1, 3, 9, 27. GCF = 9
4) 9: 1, 3, 9. 12: 1, 2, 3, 4, 6, 12. GCF = 3

2 Page 2

LCM: 1) 3 and 4: 12; 2) 2 and 7: 14; 3) 5 and 6: 30; 4) 6 and 9: 18.
Mixed practice: 1) 8; 2) 5; 3) 12; 4) 24; 5) 7; 6) 36.

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GCF and LCM: 6 and 10: GCF 2, LCM 30; 12 and 16: GCF 4, LCM 48; 9 and 12: GCF 3, LCM 36; 6 and 8: GCF 2, LCM 24; 8 and 12: GCF 4, LCM 24.
Think: 1) 7; 2) 10; 3) any pair such as 4 and 9, or 5 and 7; 4) 6, 18, 30, 42 … (not 24 or 36).

4 Page 4: word problems

1) 6 baskets (the GCF of 12 and 18), each with 2 apples and 3 oranges
2) 12 minutes (the LCM of 4 and 6)
3) 24 of each (the LCM of 8 and 12): 3 packs of plates and 2 packs of cups
4) 10 friends (the GCF of 20 and 30)

5 Teaching tip

GCF is for splitting things into equal groups. LCM is for things that repeat and meet again. Asking "split or repeat?" helps children choose in word problems.

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