MATHEMATICS · KINDERGARTEN TO GRADE 3

Fact families

Difficulty level: Easy

Mathematics: Kindergarten to Grade 3

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Overview of the concept

This is how you see that addition and subtraction facts belong together. If 3 + 4 is 7, then 7 - 4 must be 3, and knowing one fact gives you the other for free. That link lets you check your own answers, since a subtraction can be checked by adding back. It turns a list of facts to memorise into a small set of connected ideas.



Rule

Fact families: if two numbers add to a third, the third minus either one gives the other.

Knowing one addition fact gives you the two subtraction facts for free.

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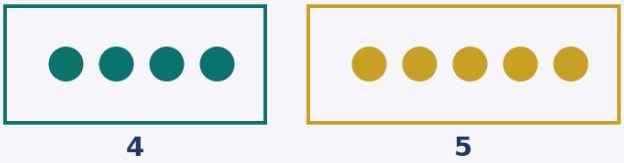
Worked examples

EXAMPLE 1

Q What is the fact family for 4, 5, and 9?



SOLUTION

The two parts are 4 and 5, and the total is 9.

Addition: 4 + 5 = 9 and 5 + 4 = 9

Subtraction: 9 - 4 = 5 and 9 - 5 = 4

EXAMPLE 2

Q What is the fact family for 3, 7, and 10?



SOLUTION

The two parts are 3 and 7, and the total is 10.

Addition: 3 + 7 = 10 and 7 + 3 = 10

Subtraction: 10 - 3 = 7 and 10 - 7 = 3

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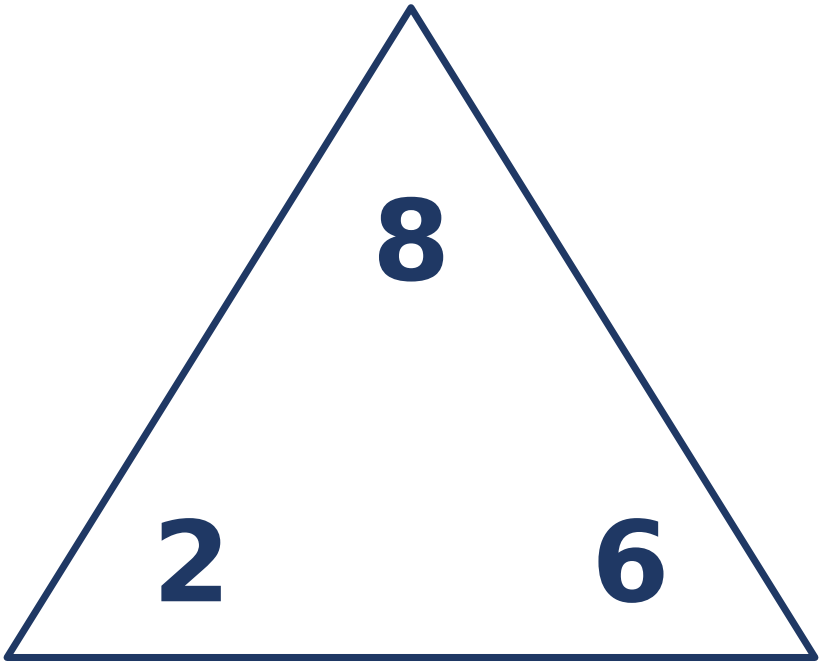
Practice questions

1 A triangle shows the numbers 2, 6 and 8, with 8 at the top. Write both addition facts for this family.



A 2 + 6 = 8, 6 + 2 = 8

B 2 + 6 = 8, 8 + 6 = 2

C 2 + 8 = 6, 6 + 2 = 8

D 6 + 8 = 2, 2 + 8 = 6

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2 Use the same triangle with 2, 6 and 8. Write both subtraction facts for this family.

- **A** 8 - 2 = 6, 6 - 2 = 8
- **B** 8 - 2 = 6, 8 - 6 = 2
- **C** 8 - 6 = 2, 2 - 6 = 8
- **D** 6 - 2 = 8, 2 - 8 = 6

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3 Write the addition fact for the family with 5, 7 and 12 that starts with 7.

- **A** 7 + 5 = 12
- **B** 7 + 12 = 5
- **C** 5 + 12 = 7
- **D** 12 + 7 = 5

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4 A triangle shows the numbers 5, 7 and 12, with 12 at the top. What is the total in this fact family?

- **A** 5
- **B** 7
- **C** 12
- **D** 19

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5 Write both addition facts for the family with 4, 9 and 13.

- **A** 4 + 9 = 13, 9 + 4 = 13
- **B** 4 + 9 = 13, 13 + 4 = 9
- **C** 4 + 13 = 9, 9 + 4 = 13
- **D** 9 + 13 = 4, 4 + 13 = 9

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6 **Write the subtraction in the fact family for 5, 7, 12 that starts with 12 and takes away 5.**

- **A** 12 - 5 = 7
- **B** 12 - 7 = 5
- **C** 5 - 12 = 7
- **D** 12 + 5 = 7

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7 **A fact family has the subtraction 15 - 6 = 9. What are the three numbers in the fact family?**

- **A** 6, 9, 15
- **B** 6, 9, 14
- **C** 6, 10, 15
- **D** 5, 9, 15

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8 **Why does the fact family for 5, 5, 10 have only one subtraction fact instead of two? Write one sentence.**

- **A** Because 10 is an even number, its fact family has only one subtraction fact
- **B** Because 5 is a prime number, it can only be subtracted once
- **C** Both parts are 5, so 10 - 5 = 5 is the same fact either way
- **D** Because the second subtraction fact would be 5 - 10 = -5, which is not in the family

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9 **Which of these families has only one addition fact?**

- **A** Family A uses 2, 8, 10
- **B** Family B uses 4, 4, 8
- **C** Family C uses 3, 6, 9

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10

Which one is not true?

A 6 + 7 = 13

B 13 - 6 = 7

C 13 - 7 = 6

D 6 + 7 = 14

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ANSWER KEY

1. 2 + 6 = 8, 6 + 2 = 8

2. 8 - 2 = 6, 8 - 6 = 2

3. 7 + 5 = 12

4. 12

5. 4 + 9 = 13, 9 + 4 = 13

6. 12 - 5 = 7

7. 6, 9, 15

8. Both parts are 5, so 10 - 5 = 5 is the same fact either way

9. Family B uses 4, 4, 8

10. 6 + 7 = 14

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