

# Varied Fluency

## Step 1: Fact Families

### National Curriculum Objectives:

Mathematics Year 2: (2C1) [Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100](#)

Mathematics Year 2: (2C3) [Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems](#)

### Differentiation:

**Developing** Questions to support understanding of the relationship between addition and subtraction and knowing the purpose of the equals sign as well as the addition and subtraction signs, combinations of numbers from 5 to 10.

**Expected** Questions to support understanding of the relationship between addition and subtraction and knowing the purpose of the equals sign as well as the addition and subtraction signs, combinations of numbers from 10 to 20.

**Greater Depth** Questions to support understanding of the relationship between addition and subtraction and knowing the purpose of the equals sign as well as the addition and subtraction signs, Complete a bar model with all possible combinations of numbers from 15 to 30.

[More resources](#) which follow the same small steps as White Rose.

Did you like this resource? Don't forget to [review](#) it on our website.

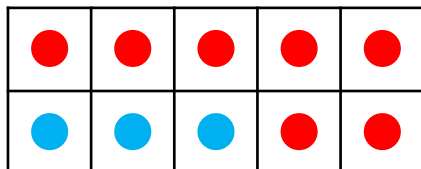
1a. Which number fact does not match the counters in this ten frame?

$$3 + 7 = 10$$

$$7 + 3 = 10$$

$$10 - 3 = 7$$

$$7 - 10 = 3$$



VF

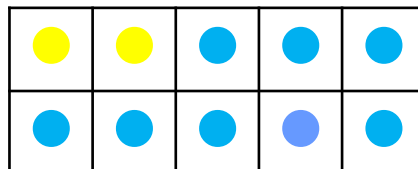
1b. Which number fact does not match the counters in this ten frame?

$$2 + 8 = 10$$

$$8 + 2 = 10$$

$$10 - 2 = 8$$

$$8 - 10 = 2$$



VF

2a. True or false?

If  $5 + 5 = 10$ , then  $10 - 5 = 5$ .



VF

2b. True or false?

If  $9 + 1 = 10$ , then  $9 - 1 = 10$ .



VF

3a. Fill in the missing part.



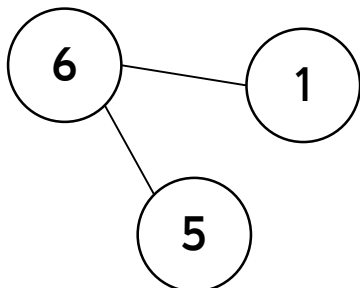
VF

3b. Fill in the missing part.



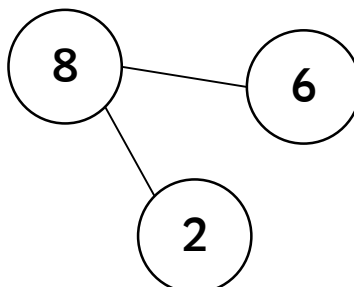
VF

4a. Write four sentences to describe the fact family shown in the part whole model.



VF

4b. Write four sentences to describe the fact family shown in the part whole model.



VF

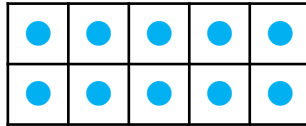
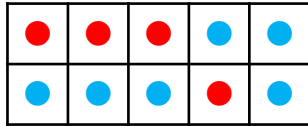
5a. Which number fact does not match the counters in these ten frames?

$$4 + 16 = 20$$

$$16 + 4 = 20$$

$$16 - 20 = 4$$

$$20 - 4 = 16$$



VF

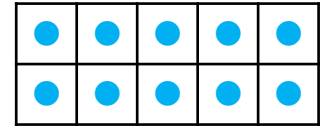
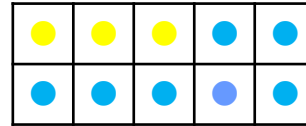
5b. Which number fact does not match the counters in these ten frames?

$$3 + 20 = 17$$

$$17 + 3 = 20$$

$$20 - 3 = 17$$

$$20 - 17 = 3$$



VF

6a. True or false?

If  $18 + 2 = 20$ , then  $20 + 2 = 18$ .



VF

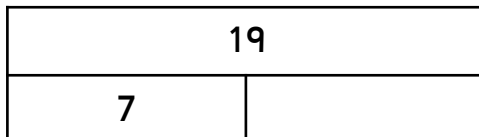
6b. True or false?

If  $19 + 1 = 20$ , then  $20 - 19 = 1$ .



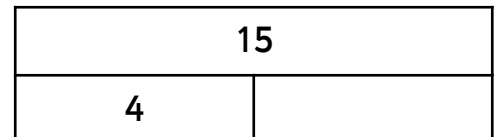
VF

7a. Fill in the missing part.



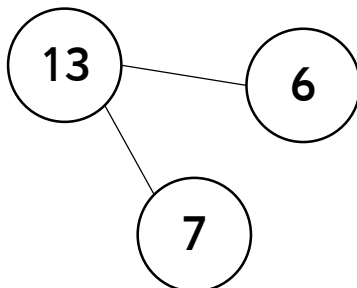
VF

7b. Fill in the missing part.



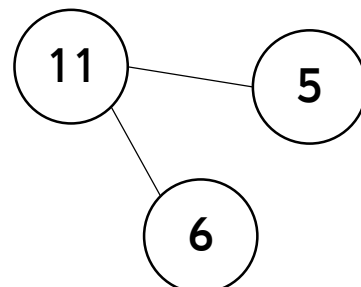
VF

8a. Write four sentences to describe the fact family shown in the part whole model.



VF

8b. Write four sentences to describe the fact family shown in the part whole model.



VF

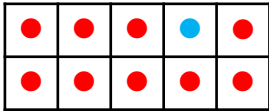
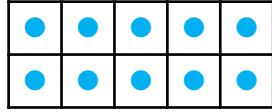
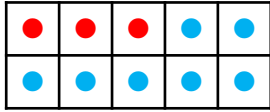
9a. Which number fact does not match the counters in these ten frames?

$$12 + 18 = 30$$

$$18 + 12 = 30$$

$$18 - 30 = 12$$

$$30 - 12 = 18$$



VF

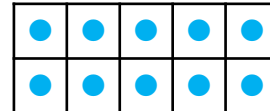
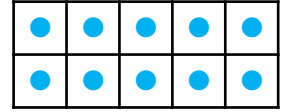
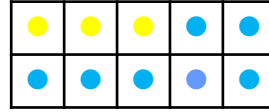
9b. Which number fact does not match the counters in these ten frames?

$$3 + 27 = 30$$

$$27 + 3 = 30$$

$$30 - 3 = 27$$

$$27 - 30 = 3$$



VF

10a. True or false?

If  $11 + 19 = 30$ , then  $30 + 11 = 19$ .



VF

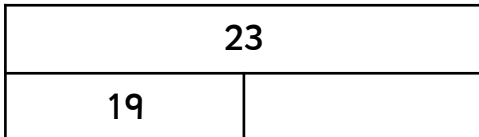
10b. True or false?

If  $17 + 1 = 18$ , then  $1 - 18 = 17$ .



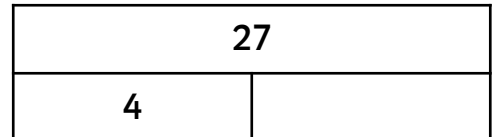
VF

11a. Fill in the missing part.



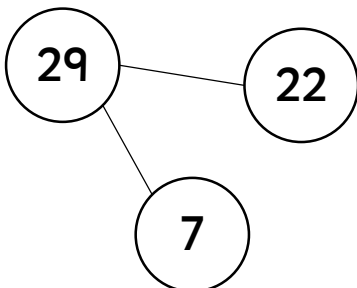
VF

11b. Fill in the missing part.



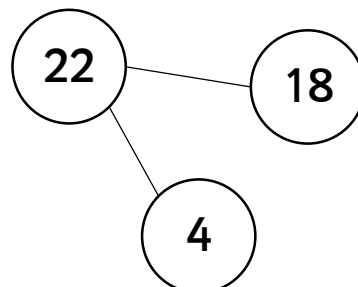
VF

12a. Write four sentences to describe the fact family shown in the part whole model.



VF

12b. Write four sentences to describe the fact family shown in the part whole model.



VF

# Varied Fluency – Fact Families

## Developing

1a.  $7 - 10 = 3$

1b.  $8 - 10 = 2$

2a. True

2b. False

3a. 4

3b. 3

4a.  $5 + 1 = 6$ ,  $1 + 5 = 6$ ,  $6 - 5 = 1$ ,  $6 - 1 = 5$

4b.  $6 + 2 = 8$ ,  $2 + 6 = 8$ ,  $8 - 6 = 2$ ,  $8 - 2 = 6$

## Expected

5a.  $16 - 20 = 4$

5b.  $3 + 20 = 17$

6a. False

6b. True

7a. 12

7b. 11

8a.  $7 + 6 = 13$ ,  $6 + 7 = 13$ ,  $13 - 7 = 6$ ,  $13 - 6 = 7$

8b.  $6 + 5 = 11$ ,  $5 + 6 = 11$ ,  $11 - 5 = 6$ ,  $11 - 6 = 5$

## Greater Depth

9a.  $18 - 30 = 12$

9b.  $27 - 30 = 3$

10a. False

10b. False

11a. 4

11b. 23

12a.  $22 + 7 = 29$ ,  $7 + 22 = 29$ ,  $29 - 22 = 7$ ,  $29 - 7 = 22$

12b.  $18 + 4 = 22$ ,  $4 + 18 = 22$ ,  $22 - 18 = 4$ ,  $22 - 4 = 18$