

# 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 the relationship between addition and subtraction and the purpose of the =, + and – signs. Use of one-to-one pictorial representations within 10 to support.

**Expected** Questions to support understanding the relationship between addition and subtraction and the purpose of the =, + and – signs. Use of pictorial support, including ten frames, part whole models within 20.

**Greater Depth** Questions to support understanding the relationship between addition and subtraction and the purpose of the =, + and – signs. Use of numbers, words and a variety of representations within 20, including number lines.

More [Year 1 and Year 2 Addition and Subtraction](#) resources.

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

## Fact Families

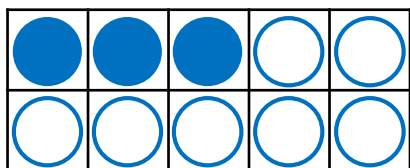
1a. Which number sentence does not match the counters in this ten frame?

$$3 + 7 = 10$$

$$7 + 3 = 10$$

$$10 - 3 = 7$$

$$7 - 10 = 3$$



2 VF

## Fact Families

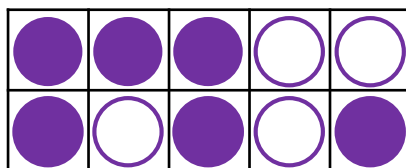
1b. Which number sentence does not match the counters in this ten frame?

$$4 + 6 = 10$$

$$6 + 4 = 10$$

$$6 - 10 = 4$$

$$10 - 4 = 6$$



2 VF

2a. True or false?

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



2 VF

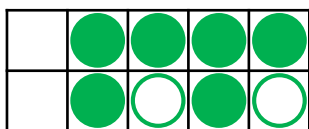
2b. True or false?

If  $3 + 4 = 7$ , then  $7 - 4 = 3$ .



2 VF

3a. Use the tens frame to complete the missing numbers.



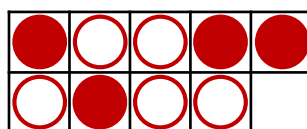
$$3 + \text{pink splash} = 8$$

$$\text{pink splash} + 3 = 8$$



2 VF

3b. Use the tens frame to complete the missing numbers.



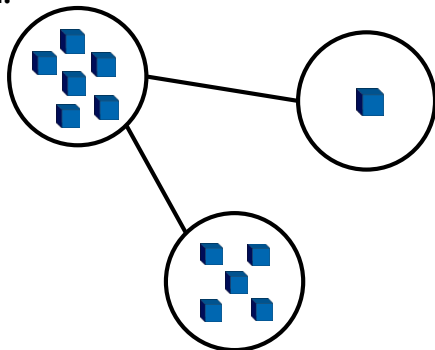
$$4 + \text{blue splash} = 9$$

$$\text{blue splash} + 4 = 9$$



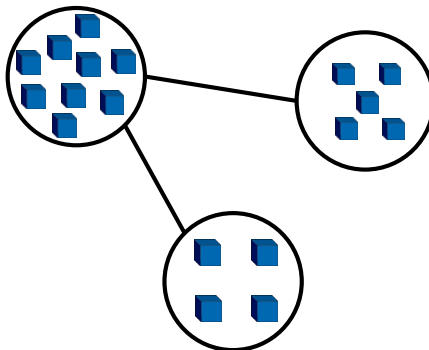
2 VF

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



2 VF

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



2 VF

## Fact Families

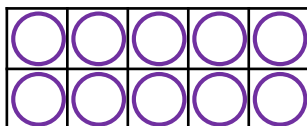
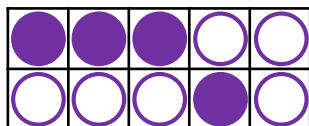
5a. Which number sentence does not match the counters in these ten frames?

$$4 + 16 = 20$$

$$16 + 4 = 20$$

$$16 - 20 = 4$$

$$20 - 4 = 16$$



2 VF

## Fact Families

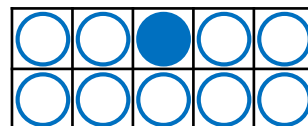
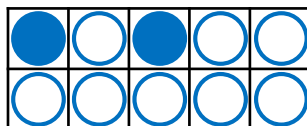
5b. Which number sentence does not match the counters in these ten frames?

$$3 + 17 = 20$$

$$17 + 3 = 20$$

$$20 - 3 = 17$$

$$17 - 20 = 3$$



2 VF

6a. True or false?

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



2 VF

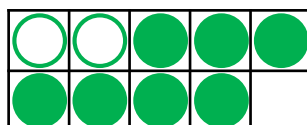
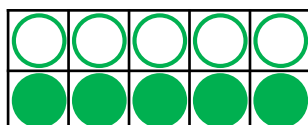
6b. True or false?

If  $11 + 6 = 17$ , then  $17 + 6 = 11$ .



2 VF

7a. Use the tens frame to complete the missing numbers.



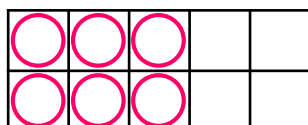
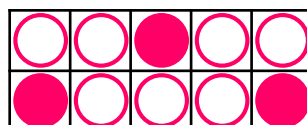
$$7 + \text{orange blob} = 19$$

$$19 - \text{orange blob} = 7$$



2 VF

7b. Use the tens frame to complete the missing numbers.



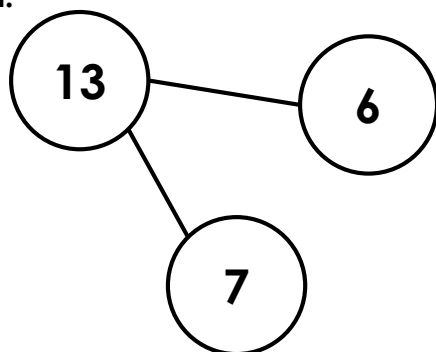
$$3 + \text{blue blob} = 16$$

$$16 - \text{blue blob} = 3$$



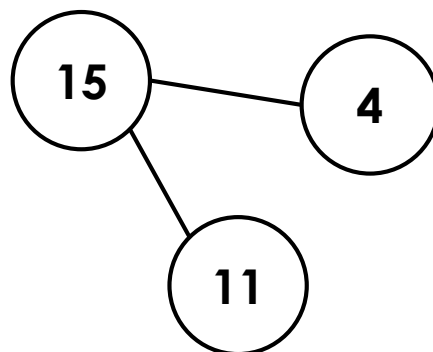
2 VF

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



2 VF

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



2 VF

## Fact Families

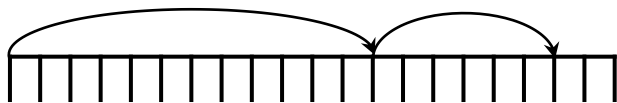
9a. Which number sentence does not match the jumps on the number line?

$$18 = 6 + 12$$

$$6 + 12 = 18$$

$$12 - 18 = 6$$

$$18 = 12 + 6$$



2 VF

## Fact Families

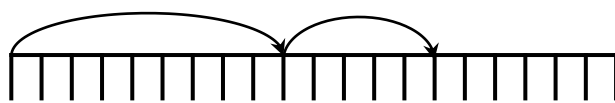
9b. Which number sentence does not match the jumps on the number line?

$$14 = 5 + 9$$

$$5 + 9 = 14$$

$$9 - 14 = 5$$

$$14 = 9 + 5$$



2 VF

10a. True or false?

If  $20 - 9 = 11$ , then  $20 + 11 = 9$ .



2 VF

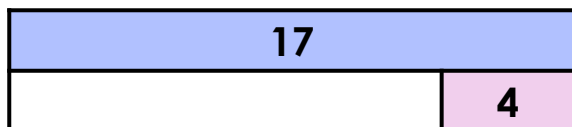
10b. True or false?

If  $16 - 7 = 9$ , then  $16 + 7 = 9$ .



2 VF

11a. Use the bar model to complete the missing numbers.



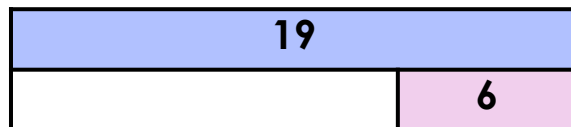
$$17 = \text{green blob} + 4$$

$$\text{green blob} = 17 - 4$$



2 VF

11b. Use the bar model to complete the missing numbers.



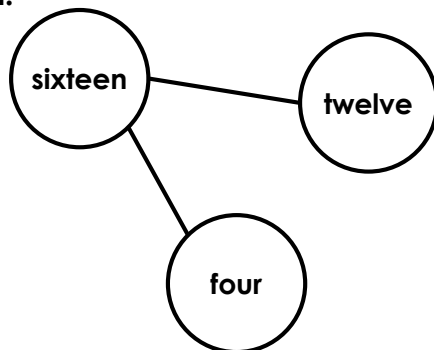
$$6 = 19 - \text{purple blob}$$

$$6 + \text{purple blob} = 19$$



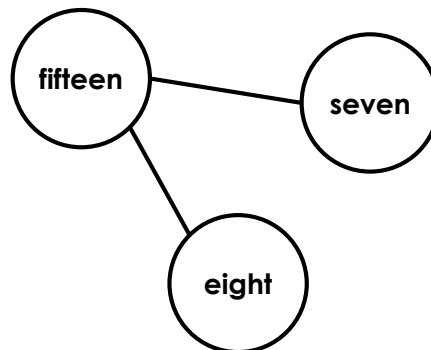
2 VF

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



2 VF

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



2 VF

## Varied Fluency Fact Families

### Developing

1a.  $7 - 10 = 3$

2a. **True**

3a. **5**

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

### Expected

5a.  $16 - 20 = 4$

6a. **False, because  $20 + 2 = 22$ ; it should be  $20 - 2 = 18$ .**

7a. **12**

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

### Greater Depth

9a.  $12 - 18 = 6$

10a. **False, because  $20 + 11 = 31$ ; it should be  $20 - 11 = 9$ .**

11a. **13**

12a. **twelve + four = sixteen;  
four + twelve = sixteen;  
sixteen - twelve = four;  
sixteen - four = twelve.**

## Varied Fluency Fact Families

### Developing

1b.  $6 - 10 = 4$

2b. **True**

3b. **5**

4b.  $5 + 4 = 9$ ,  $4 + 5 = 9$ ,  $9 - 5 = 4$ ,  $9 - 4 = 5$

### Expected

5b.  $17 - 20 = 3$

6b. **False, because  $17 + 6 = 23$ ; it should be  $17 - 6 = 11$ .**

7b. **13**

8b.  $4 + 11 = 15$ ,  $11 + 4 = 15$ ,  $15 - 4 = 11$ ,  
 $15 - 11 = 4$

### Greater Depth

9b.  $9 - 14 = 5$

10b. **False, because  $16 + 7 = 23$ ; it should be  $16 - 7 = 9$ .**

11b. **13**

12b. **seven + eight = fifteen;  
eight + seven = fifteen;  
fifteen - eight = seven;  
fifteen - seven = eight.**