

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 2 Addition and Subtraction](#) resources.

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

Fact Families

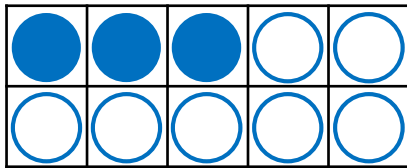
1a. Which number sentence does not match the counters in this ten frame?

$$3 + 7 = 10$$

$$7 + 3 = 10$$

$$10 - 3 = 7$$

$$7 - 10 = 3$$



VF

Fact Families

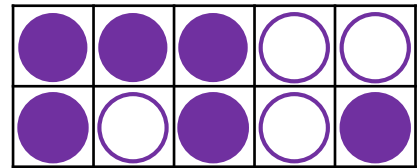
1b. Which number sentence does not match the counters in this ten frame?

$$4 + 6 = 10$$

$$6 + 4 = 10$$

$$6 - 10 = 4$$

$$10 - 4 = 6$$



VF

2a. True or false?

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



VF

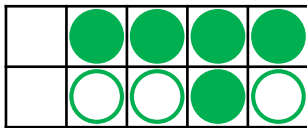
2b. True or false?

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



VF

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



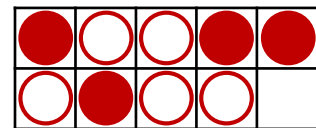
$$3 + \text{pink splat} = 8$$

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



VF

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



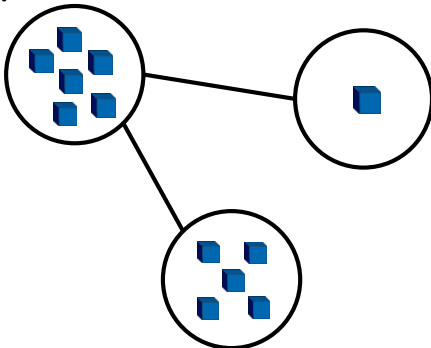
$$4 + \text{blue splat} = 9$$

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



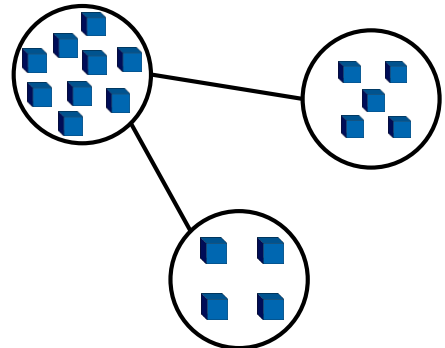
VF

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

Fact Families

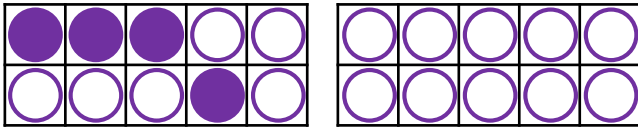
5a. Which number sentence does not match the counters in these ten frames?

$$4 + 16 = 20$$

$$16 + 4 = 20$$

$$16 - 20 = 4$$

$$20 - 4 = 16$$



VF

Fact Families

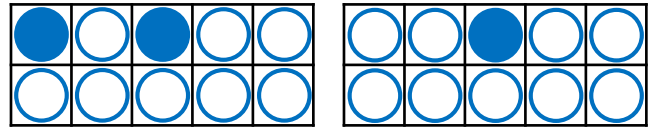
5b. Which number sentence does not match the counters in these ten frames?

$$3 + 17 = 20$$

$$17 + 3 = 20$$

$$20 - 3 = 17$$

$$17 - 20 = 3$$



VF

6a. True or false?

$$\text{If } 18 + 2 = 20, \text{ then } 20 + 2 = 18.$$



VF

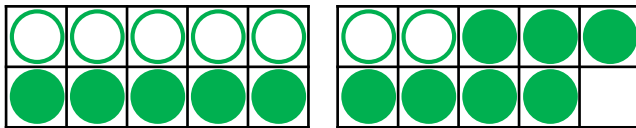
6b. True or false?

$$\text{If } 11 + 6 = 17, \text{ then } 17 + 6 = 11.$$



VF

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



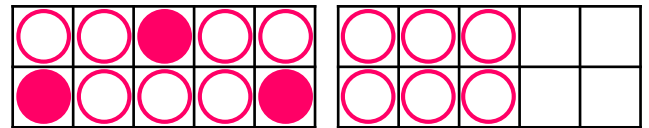
$$7 + \text{orange blob} = 19$$

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



VF

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



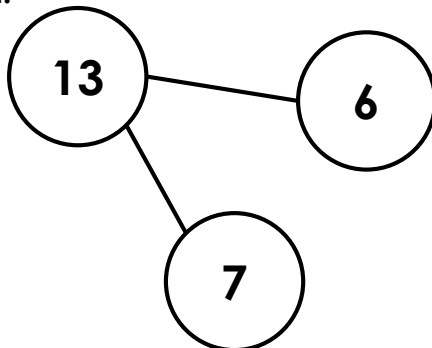
$$3 + \text{blue blob} = 16$$

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



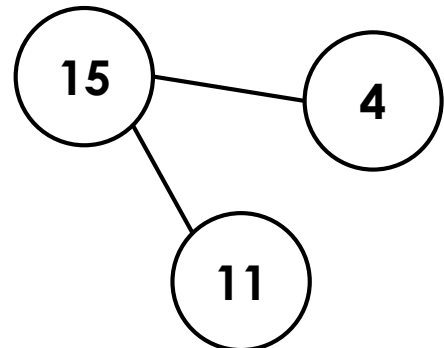
VF

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

Fact Families

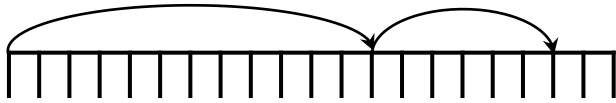
9a. Which number sentence does not match the jumps on the number line?

$$18 = 6 + 12$$

$$6 + 12 = 18$$

$$12 - 18 = 6$$

$$18 = 12 + 6$$



VF

Fact Families

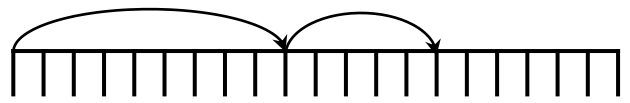
9b. Which number sentence does not match the jumps on the number line?

$$14 = 5 + 9$$

$$5 + 9 = 14$$

$$9 - 14 = 5$$

$$14 = 9 + 5$$



VF

10a. True or false?

$$\text{If } 20 - 9 = 11, \text{ then } 20 + 11 = 9.$$



VF

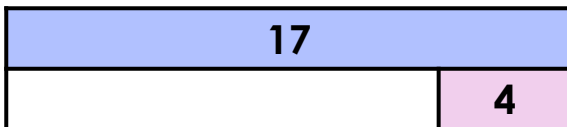
10b. True or false?

$$\text{If } 16 - 7 = 9, \text{ then } 16 + 7 = 9.$$



VF

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



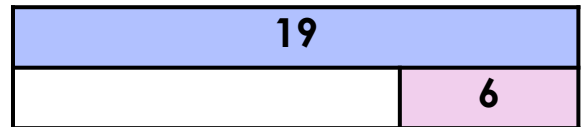
$$17 = \text{[green blob]} + 4$$

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



VF

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



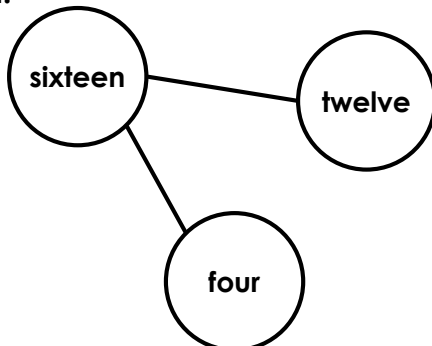
$$6 = 19 - \text{[purple blob]}$$

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



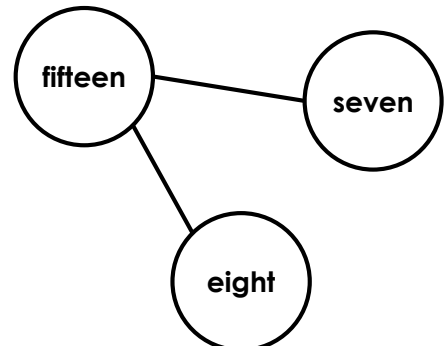
VF

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. $7 - 10 = 3$

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.