

# Varied Fluency

## Step 11: Division using Factors

### National Curriculum Objectives:

Mathematics Year 6: (6C5) [Identify common factors, common multiples and prime numbers](#)

Mathematics Year 6: (6C8) [Solve problems involving addition, subtraction, multiplication and division](#)

### Differentiation:

**Developing** Questions to support the use of factors (using knowledge of the 2, 5 and 10 times table) to divide 3-digit numbers by 2-digit numbers.

**Expected** Questions to support the use of factors (using knowledge of table facts to 12 x 12) to divide 4-digit numbers by 2-digit numbers.

**Greater Depth** Questions to support the use of factors (using knowledge of table facts to 12 x 12 and beyond) to divide 5-digit numbers by 2-digit numbers.

More [Year 5 and Year 6 Multiplication and Division](#) resources.

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

# Varied Fluency – Division using Factors

1a. Which factor pairs could you use to solve:

$$900 \div 30$$



6 VF

1b. Which factor pairs could you use to solve:

$$800 \div 20$$



6 VF

2a. A seal eats approximately 15kg of fish each day. How many seals can be fed with 840kg of fish?



6 VF

2b. Eighteen footballs are packed into each box. The warehouse has 450 footballs to pack. How many boxes will they have?



6 VF

3a. Which factor pair will solve:

$$650 \div 25$$

$$650 \div 10 = 65 \text{ then } 65 \div 15 = 4$$

$$650 \div 5 = 130 \text{ then } 130 \div 5 = 26$$

$$650 \div 2 = 325 \text{ then } 312 \div 5 = 65$$



6 VF

3b. Which factor pair will solve:

$$840 \div 24$$

$$840 \div 2 = 420 \text{ then } 420 \div 4 = 105$$

$$840 \div 12 = 70 \text{ then } 70 \div 12 = 6$$

$$840 \div 12 = 70 \text{ then } 70 \div 2 = 35$$



6 VF

4a. Add the missing factor to complete the statement.

$$780 \div 12 = 65$$

$$780 \div 6 = 130 \text{ then } 130 \div \square = 65$$



6 VF

4b. Add the missing factor to complete the statement.

$$910 \div 35 = 26$$

$$910 \div 7 = 130 \text{ then } 130 \div \square = 26$$



6 VF

# Varied Fluency – Division using Factors

5a. Which factor pairs could you use to solve:

$$3,200 \div 20$$



6 VF

5b. Which factor pairs could you use to solve:

$$6,200 \div 40$$



6 VF

6a. Fifteen coloured pencils are put into each packet. The warehouse has 4,800 pencils to pack. How many packets will they have?



6 VF

6b. A dozen buns are packed into each box. The bakery has 3,000 buns to pack. How many boxes will they have?



6 VF

7a. Which factor pair will solve:

$$6,250 \div 25$$

$$6,250 \div 10 = 625 \text{ then } 625 \div 15 = 42$$

$$6,250 \div 5 = 1,250 \text{ then } 1,250 \div 5 = 250$$

$$6,250 \div 20 = 312 \text{ then } 312 \div 5 = 62$$



6 VF

7b. Which factor pair will solve:

$$8,400 \div 48$$

$$8,400 \div 20 = 420 \text{ then } 420 \div 28 = 15$$

$$8,400 \div 12 = 700 \text{ then } 700 \div 6 = 117$$

$$8,400 \div 12 = 700 \text{ then } 700 \div 4 = 175$$



6 VF

8a. Add the missing factor to complete the statement.

$$1,728 \div 36 = 48$$

$$1,728 \div 12 = 144 \text{ then } 144 \div \square = 48$$



6 VF

8b. Add the missing factor to complete the statement.

$$3,072 \div 32 = 96$$

$$3,072 \div 4 = 768 \text{ then } 768 \div \square = 96$$



6 VF

# Varied Fluency – Division using Factors

9a. Which factor pairs could you use to solve:

$$60,000 \div 80$$



6 VF

9b. Which factor pairs could you use to solve:

$$12,500 \div 50$$



6 VF

10a. Each child runs 75m. The total distance completed by all the runners is 32,250m. How many children completed the run?



6 VF

10b. Two dozen trophies are packed into each box. The warehouse has 21,600 trophies to pack. How many boxes will they have?



6 VF

11a. Which factor pair will solve:

$$30,600 \div 45$$

$$30,600 \div 30 = 1,020 \text{ then } 1,020 \div 15 = 68$$

$$30,600 \div 10 = 3,600 \text{ then } 3,600 \div 9 = 400$$

$$30,600 \div 9 = 3,400 \text{ then } 3,400 \div 5 = 680$$



6 VF

11b. Which factor pair will solve:

$$11,025 \div 63$$

$$11,025 \div 6 = 1,837 \text{ then } 1,837 \div 3 = 612$$

$$11,025 \div 9 = 1,225 \text{ then } 1,225 \div 7 = 175$$

$$11,025 \div 11 = 1,002 \text{ then } 1,002 \div 6 = 167$$



6 VF

12a. Add the missing factor to complete the statement.

$$30,240 \div 72 = 420$$

$$30,240 \div 18 = 1,680$$

$$\text{then } 1,680 \div \square = 420$$



6 VF

12b. Add the missing factor to complete the statement.

$$10,260 \div 54 = 190$$

$$10,260 \div 6 = 1,710$$

$$\text{then } 1,710 \div \square = 190$$



6 VF

# Varied Fluency – Division using Factors

## Developing

1a. Various answers; for example: divide by 10 then divide by 3; divide by 3 then divide by 10; divide by 5 then divide by 6; divide by 6 then divide by 5.

1b. Various answers; for example: divide by 10 then divide by 2; divide by 2 then divide by 10; divide by 5 then divide by 4; divide by 4 then divide by 5.

2a. 56 seals

2b. 25 boxes

3a.  $650 \div 5 = 130$  then  $130 \div 5 = 26$

3b.  $840 \div 12 = 70$  then  $70 \div 2 = 35$

4a. 2

4b. 5

## Expected

5a. Various answers; for example: divide by 10 then divide by 2; divide by 2 then divide by 10; divide by 5 then divide by 4; divide by 4 then divide by 5

5b. Various answers; for example: divide by 10 then divide by 4; divide by 4 then divide by 10; divide by 8 then divide by 5; divide by 5 then divide by 8;

6a. 320 packets

6b. 250 boxes

7a.  $6,250 \div 5 = 1,250$  then  $1250 \div 5 = 250$

7b.  $8,400 \div 12 = 700$  then  $700 \div 4 = 175$

8a. 3

8b. 8

## Greater Depth

9a. Various answers; for example: divide by 10 then divide by 8; divide by 8 then divide by 10; divide by 16 then divide by 5; divide by 5 then divide by 16; divide by 20 then divide by 4.

9b. Various answers; for example: divide by 10 then divide by 5; divide by 5 then divide by 10; : divide by 25 then divide by 2; divide by 2 then divide by 25;

10a. 430 children

10b. 900 boxes

11a.  $30,600 \div 9 = 3,400$  then  $3,400 \div 5 = 680$

11b.  $11,025 \div 9 = 1,225$  then  $1,225 \div 7 = 175$

12a. 4

12b. 9