Varied Fluency
Step 4: 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 factor pairs to divide 3-digit numbers by 2-digit numbers where one of the factors is either 2, 3, 4, 5 or 10.
Expected Questions to support the use of factors, to divide numbers up to 4-digits by 2-digit numbers using knowledge of multiplication facts up to 12 x 12.
Greater Depth Questions to support the use of 2 or more factors to divide numbers up to 4-digits by 2-digit numbers using knowledge of table facts to 12 x 12 and beyond.

More Year 6 Four Operations resources.

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Division Using Factors

1a. Which factor pairs could you use to solve the calculation below?

630 ÷ 30

D VF

Division Using Factors

1b. Which factor pairs could you use to solve the calculation below?

480 ÷ 20

D VF

2a. Which factor pair will solve the calculation below?

500 ÷ 25

A. 500 ÷ 10 = 50 then 50 ÷ 5 = 10

B. 500 ÷ 5 = 100 then 100 ÷ 5 = 20

C. 500 ÷ 2 = 250 then 250 ÷ 5 = 50

D VF

2b. Which factor pair will solve the calculation below?

600 ÷ 12

A. 600 ÷ 6 = 100 then 100 ÷ 2 = 50

B. 600 ÷ 10 = 60 then 60 ÷ 2 = 30

C. 600 ÷ 2 = 300 then 300 ÷ 3 = 100

D VF

3a. Add the missing factor to complete the statement.

360 ÷ 12

360 ÷ 6 = 60

then

60 ÷ ☐ = 30

D VF

3b. Add the missing factor to complete the statement.

450 ÷ 15

450 ÷ 5 = 90

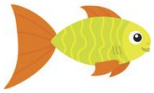
then

90 ÷ ☐ = 30

D VF

4a. A sea lion eats approximately 20kg of fish each day. The sea life centre has 240kg of fish.





Use factor pairs to work out how many sea lions can be fed.

D VF

4b. Thirty footballs are packed into each box. The warehouse has 270 footballs to pack.





Use factor pairs to work out how many boxes they will pack.

D VF

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Division Using Factors

5a. Which factor pairs could you use to solve the calculation below?

210 ÷ 42

E VF

Division Using Factors

5b. Which factor pairs could you use to solve the calculation below?

240 ÷ 48

E VF

6a. Which factor pair will solve the calculation below?

7,200 ÷ 48

A. 7,200 ÷ 20 = 360 then 360 ÷ 8 = 45

B. 7,200 ÷ 12 = 600 then 600 ÷ 6 = 100

C. 7,200 ÷ 8 = 900 then 900 ÷ 6 = 150

E VF

6b. Which factor pair will solve the calculation below?

5,400 ÷ 36

A. 5,400 ÷ 3 = 1,800 then 1,800 ÷ 6 = 300

B. 5,400 ÷ 6 = 900 then 900 ÷ 6 = 150

C. 5,400 ÷ 5 = 1,080 then 1,080 ÷ 6 = 180

E VF

7a. Add the missing factor to complete the statement.

3,600 ÷ 72

3,600 ÷ 12 = 300

then

300 ÷ ☐ = 50

E VF

7b. Add the missing factor to complete the statement.

2,800 ÷ 56

2,800 ÷ 7 = 400

then

400 ÷ ☐ = 50

E VF

8a. Twenty-four coloured pencils are put into each packet. The warehouse has 4,824 pencils to pack.



Use factor pairs to work out how many packets they will pack.

E VF

8b. Forty-two cakes are packed into trays. The bakery has 2,142 cakes to pack.



Use factor pairs to work out how many trays they will pack.

E VF

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9a. Which factors could you use to solve the calculation below?

3,075 ÷ 75

GD VF

Division Using Factors

9b. Which factors could you use to solve the calculation below?

5,226 ÷ 39

GD VF

10a. Which factor pair will solve the calculation below?

2,652 ÷ 52

A. 2,652 ÷ 2 = 1,326 then 1,326 ÷ 13 = 102

B. 2,652 ÷ 13 = 204 then 204 ÷ 4 = 51

C. 2,652 ÷ 3 = 884 then 884 ÷ 4 = 221

GD VF

10b. Which factor pair will solve the calculation below?

3,468 ÷ 68

A. 3,468 ÷ 12 = 289 then 289 ÷ 17 = 17

B. 3,468 ÷ 6 = 578 then 578 ÷ 2 = 289

C. 3,468 ÷ 17 = 204 then 204 ÷ 4 = 51

GD VF

11a. Add the missing factor to complete the statement.

4,284 ÷ 84

4,284 ÷ 14 = 306

then

306 ÷ ☐ = 51

GD VF

11b. Add the missing factor to complete the statement.

8,585 ÷ 85

8,585 ÷ 17 = 505

then

505 ÷ ☐ = 101

GD VF

12a. Ninety-nine trophies are packed into each crate. The warehouse has 3,366 trophies to pack.



Use factors to work out how many trophies they will pack.

GD VF

12b. Each athlete runs 75m. The total distance completed by all runners is 4,500m.



Use factors to work out how many athletes completed the run.

GD VF

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Varied Fluency
Division Using Factors

Developing

1a. 3 and 10, 5 and 6

2a. B

3a. 2

4a. Various answers, for example:
240 ÷ 10 = 24 then 24 ÷ 2 = 12;
240 ÷ 4 = 60 then 60 ÷ 5 = 12

Expected

5a. 6 and 7

6a. C

7a. 6

8a. Various answers, for example:
4,824 ÷ 12 = 402 then 402 ÷ 2 = 201;
4,824 ÷ 4 = 1,206 then 1,206 ÷ 6 = 201;
4,824 ÷ 8 = 603 then 603 ÷ 3 = 201

Greater Depth

9a. 3 and 25, 5 and 15, 3, 5 and 5

10a. B

11a. 6

12a. Various answers, for example:
3,366 ÷ 11 = 306 then 306 ÷ 3 = 102 then 102 ÷ 3 = 34;
3,366 ÷ 33 = 102 then 102 ÷ 3 = 34

Varied Fluency
Division Using Factors

Developing

1b. 2 and 10, 4 and 5

2b. A

3b. 3

4b. Various answers, for example:
270 ÷ 10 = 27 then 27 ÷ 3 = 9

Expected

5b. 4 and 12, 6 and 8

6b. B

7b. 8

8b. Various answers, for example:
2,142 ÷ 7 = 306 then 306 ÷ 6 = 51

Greater Depth

9b. 13 and 3

10b. C

11b. 5

12b. Various answers, for example:
4,500 ÷ 5 = 900 then 900 ÷ 5 = 180 then 180 ÷ 3 = 60;
4,500 ÷ 15 = 300 then 300 ÷ 5 = 60;
4,500 ÷ 25 = 180 then 180 ÷ 3 = 60

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