Homework/Extension
Step 4: Division Using Factors

National Curriculum Objectives:

Mathematics Year 6: (6C7b) Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
Mathematics Year 6: (6C8) Solve problems involving addition, subtraction, multiplication and division

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)
Developing Circle the factor pair which can be used to divide 3-digit numbers by 2-digit numbers, where one of the factors is either 2, 3, 4, 5 or 10. Solve the calculation using one of the given factor pairs.
Expected Circle the factor pairs which can be used to divide numbers up to 4 digits by 2-digit numbers, using knowledge of multiplication facts up to 12x12. Solve the calculation using one of the given factor pairs.
Greater Depth Circle the factor pairs which can be used to divide numbers up to 4 digits by 2-digit numbers, using knowledge of multiplication facts to 12x12 and beyond. Solve the calculation using one of the given factor pairs.

Questions 2, 5 and 8 (Varied Fluency)
Developing Match the division calculations to a factor pair and the answer. Includes dividing 3-digit numbers by 2-digit numbers, where one of the factors is either 2, 3, 4, 5 or 10.
Expected Match the division calculations to a factor pair and the answer. Includes dividing numbers up to 4 digits by 2-digit numbers, using knowledge of multiplication facts up to 12x12.
Greater Depth Match the division calculations to a factor pair and the answer. Includes dividing numbers up to 4 digits by 2-digit numbers, using knowledge of multiplication facts to 12x12 and beyond.

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Use factor pairs to solve the division calculations, find the odd one out and explain why. Includes dividing 3-digit numbers by 2-digit numbers, where one of the factors is either 2, 3, 4, 5 or 10.
Expected Use factor pairs to solve the division calculations, find the odd one out and explain why. Includes dividing numbers up to 4 digits by 2-digit numbers, using knowledge of multiplication facts up to 12x12.
Greater Depth Use factor pairs to solve the division calculations, find the odd one out and explain why. Includes dividing numbers up to 4 digits by 2-digit numbers, using knowledge of multiplication facts to 12x12 and beyond.

More Year 6 Four Operations resources.

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Division Using Factors

1. Circle the factor pair which could be used to solve the division calculation below.

$$240 \div 20 =$$

5 and 10	2 and 3	10 and 2	4 and 10

Use the factor pair to solve the calculation.

D

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2. Match each calculation to its factor pair and the correct answer.

270 ÷ 30	6 and 2	7
350 ÷ 50	10 and 3	5
600 ÷ 12	10 and 4	9
200 ÷ 40	5 and 10	50

D

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3. Use factor pairs to solve the division calculations below.

$$360 \div 60 =$$

$$150 \div 15 =$$

$$120 \div 20 =$$

$$480 \div 40 =$$

Which is the odd one out? Explain why.

D

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Division Using Factors

4. Circle the factor pairs which could be used to solve the division calculation below.

$$8{,}400 \div 12 =$$

6 and 4	10 and 2	4 and 8	2 and 6
4 and 3	12 and 2	6 and 6	

Choose a pair to solve the calculation.

E

VF
HW/Ext

5. Match each calculation to its factor pair and the correct answer.

6,300 ÷ 90	2 and 7	8
2,870 ÷ 14	10 and 8	70
640 ÷ 80	10 and 9	22
550 ÷ 25	5 and 5	205

E

VF
HW/Ext

6. Use factor pairs to solve the division calculations below.

$$4{,}848 \div 24 = \qquad 6{,}120 \div 18 =$$

$$5{,}460 \div 60 = \qquad 3{,}550 \div 50 =$$

Which is the odd one out? Explain why.

E

RPS
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Division Using Factors

7. Circle the factor pairs which could be used to solve the division calculation below.

$$2{,}652 \div 26 =$$

2 and 16	20 and 6	13 and 2	18 and 8
12 and 2	16 and 10	6 and 12	

Choose a pair to solve the calculation.

GD

VF
HW/Ext

8. Match each calculation to its factor pair and the correct answer.

2,856 ÷ 42	2 and 16	201
6,496 ÷ 32	18 and 2	68
9,045 ÷ 45	14 and 3	102
3,672 ÷ 36	3 and 15	203

GD

VF
HW/Ext

9. Use factor pairs to solve the division calculations below.

$$7{,}839 \div 39 =$$

$$4{,}896 \div 48 =$$

$$9{,}664 \div 32 =$$

$$5{,}151 \div 51 =$$

Which is the odd one out? Explain why.

GD

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Division Using Factors

Developing

1. 10 and 2;
240 ÷ 2 = 120 and 120 ÷ 10 = 12
240 ÷ 20 = 12
2. 270 ÷ 30, 10 and 3, 9; 350 ÷ 50, 5 and 10, 7; 600 ÷ 12, 6 and 2, 50; 200 ÷ 40, 10 and 4, 5
3. 360 ÷ 60 = 6; 150 ÷ 15 = 10; 120 ÷ 20 = 6; 480 ÷ 40 = 12;
150 ÷ 15 is the odd one out because 15 does not have a factor pair including the number 10.

Expected

4. 2 and 6, 4 and 3;
8,400 ÷ 2 = 4,200 and 4,200 ÷ 6 = 700
8,400 ÷ 4 = 2,100 and 2,100 ÷ 3 = 700
8,400 ÷ 12 = 700
5. 6,300 ÷ 90, 10 and 9, 70; 2,870 ÷ 14, 2 and 7, 205; 640 ÷ 80, 10 and 8, 8;
505 ÷ 25, 5 and 5, 22
6. 4,848 ÷ 24 = 202; 6,120 ÷ 18 = 340; 5,460 ÷ 60 = 91; 3,550 ÷ 50 = 71;
3,550 ÷ 50 is the odd one out because 50 does not have a factor pair including the number 6.

Greater Depth

7. 13 and 2;
2,652 ÷ 13 = 204 and 204 ÷ 2 = 102
2,652 ÷ 26 = 102
8. 2,856 ÷ 42, 14 and 3, 68; 6,496 ÷ 32, 2 and 16, 203; 9,045 ÷ 45, 3 and 15, 201;
3,672 ÷ 36, 18 and 2, 102
9. 7,839 ÷ 39 = 201; 4,896 ÷ 48 = 102; 9,664 ÷ 32 = 302; 5,151 ÷ 51 = 101;
9,664 ÷ 32 is the odd one out because 32 does not have a factor pair including the number 3.

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