Reasoning and Problem Solving – Equivalent Fractions

National Curriculum Objectives:

Mathematics Year 5: (5F2b) Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths

Differentiation:

Developing Solving the calculations to find the values of the three missing numerators and denominators in the equivalent fractions. Fractions are in size order and always displaying the smallest fraction first. Fractions used are halves, tenths and quarters.

Secure Solving the calculations to find the values of the three missing numerators and denominators in the equivalent fractions. Fractions are in any order. Fractions used are quarters, fifths, tenths, twentieths and hundredths.

Mastery Solving the calculations to find the values of the four missing numerators and denominators in the equivalent fractions. Fractions are in any order. All fractions used including improper fractions.

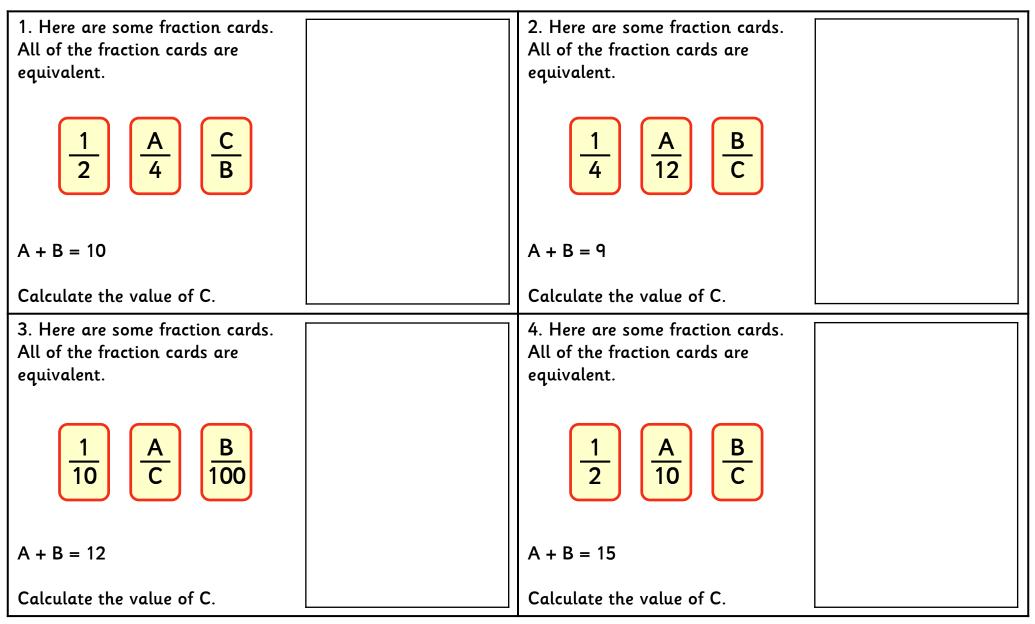More Reasoning and Problem Solving Resources.

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Reasoning and Problem Solving – Equivalent Fractions

1. Here are some fraction cards. All of the fraction cards are equivalent.

$$\frac{1}{2} \qquad \frac{A}{4} \qquad \frac{C}{B}$$

A + B = 10

Calculate the value of C.

2. Here are some fraction cards. All of the fraction cards are equivalent.

$$\frac{1}{4} \qquad \frac{A}{12} \qquad \frac{B}{C}$$

A + B = 9

Calculate the value of C.

3. Here are some fraction cards. All of the fraction cards are equivalent.

$$\frac{1}{10} \qquad \frac{A}{C} \qquad \frac{B}{100}$$

A + B = 12

Calculate the value of C.

4. Here are some fraction cards. All of the fraction cards are equivalent.

$$\frac{1}{2} \qquad \frac{A}{10} \qquad \frac{B}{C}$$

A + B = 15

Calculate the value of C.

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5. Here are some fraction cards. All of the fraction cards are equivalent.

$$\frac{1}{5} \qquad \frac{C}{A} \qquad \frac{2}{B}$$

A + B = 30

Calculate the value of C.

6. Here are some fraction cards. All of the fraction cards are equivalent.

$$\frac{A}{C} \qquad \frac{3}{B} \qquad \frac{6}{8}$$

A + B = 16

Calculate the value of C.

7. Here are some fraction cards. All of the fraction cards are equivalent.

$$\frac{A}{C} \qquad \frac{16}{20} \qquad \frac{B}{10}$$

A + B = 12

Calculate the value of C.

8. Here are some fraction cards. All of the fraction cards are equivalent.

$$\frac{12}{C} \qquad \frac{A}{5} \qquad \frac{B}{10}$$

A + B = 9

Calculate the value of C.

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9. Here are some fraction cards.
All of the fraction cards are equivalent.

$$\frac{20}{50} \quad \frac{A}{5} \quad \frac{B}{D} \quad \frac{40}{C}$$

A is half of B.
C is ten times bigger than D.

Calculate all the missing numbers.

10. Here are some fraction cards.
All of the fraction cards are equivalent.

$$\frac{A}{D} \quad \frac{B}{5} \quad \frac{140}{C} \quad \frac{28}{20}$$

B is half of A.
C is ten times bigger than D.

Calculate all the missing numbers.

11. Here are some fraction cards.
All of the fraction cards are equivalent.

$$\frac{C}{A} \quad \frac{8}{B} \quad \frac{32}{60} \quad \frac{D}{300}$$

B is half of A.
C is ten times smaller than D.

Calculate all the missing numbers.

12. Here are some fraction cards.
All of the fraction cards are equivalent.

$$\frac{A}{C} \quad \frac{10}{D} \quad \frac{1}{3} \quad \frac{B}{72}$$

A is half of B.

Calculate all the missing numbers.

Reasoning and Problem Solving – Equivalent Fractions

Developing
1. A = 2, B = 8 and C = 4
2. A = 3, B = 6 and C = 24
3. A = 2, B = 10 and C = 20
4. A = 5, B = 10 and C = 20

Secure
5. A = 20, B = 10 and C = 4
6. A = 12, B = 4 and C = 16
7. A = 4, B = 8 and C = 5
8. A = 3, B = 6 and C = 20

Mastery
9. A = 2, B = 4, C = 100 and D = 10
10. A = 14, B = 7, C = 100 and D = 10
11. A = 30, B = 15, C = 16 and D = 160
12. A = 12, B = 24, C = 36 and D = 30