

# Discussion Problems

## Step 2: Improper Fractions to Mixed Numbers

### National Curriculum Objectives:

Mathematics Year 5: (5F2a) [Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements  \$> 1\$  as a mixed number \[for example,  \$2/5 + 4/5 = 6/5 = 1 \frac{1}{5}\$ \]](#)

### About this resource:

This resource has been designed for pupils who understand the concepts within [this step](#). It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More [Year 5 Fractions](#) resources.

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

# Improper Fractions to Mixed Numbers

1. Explore the values of the square, the circle and the triangle.

$$\frac{41}{\square} = \bigcirc + \frac{\triangle}{\square}$$

$$\frac{44}{\triangle} = \square + \frac{2}{\triangle}$$

$$\frac{36}{\square} = \bigcirc + \frac{1}{\square}$$

$$\frac{\triangle + \square}{\triangle} = 11 + \frac{1}{\triangle}$$

DP

2. Jack is thinking of an improper fraction. He gives you some clues to help you to work out what it could be. He then converts it to a mixed number.

My denominator is less than 10 but greater than 5.

The digit sum of my numerator is even.

My numerator is an odd number.

My denominator is a multiple of 3.



Investigate the possible mixed numbers he could have.

DP

# Improper Fractions to Mixed Numbers

1. Explore the values of the square, the circle and the triangle.

$$\frac{41}{\boxed{7}} = 5 \frac{6}{\boxed{7}}$$

$$\frac{44}{\triangle 6} = \boxed{7} \frac{2}{\triangle 6}$$

$$\frac{36}{\boxed{7}} = 5 \frac{1}{\boxed{7}}$$

$$\frac{\triangle 6 \boxed{7}}{\triangle 6} = 11 \frac{1}{\triangle 6}$$

Square = 7, circle = 5, triangle = 6

DP

2. Jack is thinking of an improper fraction. He gives you some clues to help you to work out what it could be. He then converts it to a mixed number.

My denominator is less than 10 but greater than 5.

The digit sum of my numerator is even.

My numerator is an odd number.

My denominator is a multiple of 3.

Investigate the possible mixed numbers he could have.

Various answers, for example  $\frac{71}{6} = 11 \frac{5}{6}$ .

DP