

Discussion Problems

Step 16: Multiply Unit Fractions by an Integer

National Curriculum Objectives:

Mathematics Year 5: (5F5) [Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams](#)

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 \[for example, \$2/5 + 4/5 = 6/5 = 1 \frac{1}{5}\$ \]](#)

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

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.

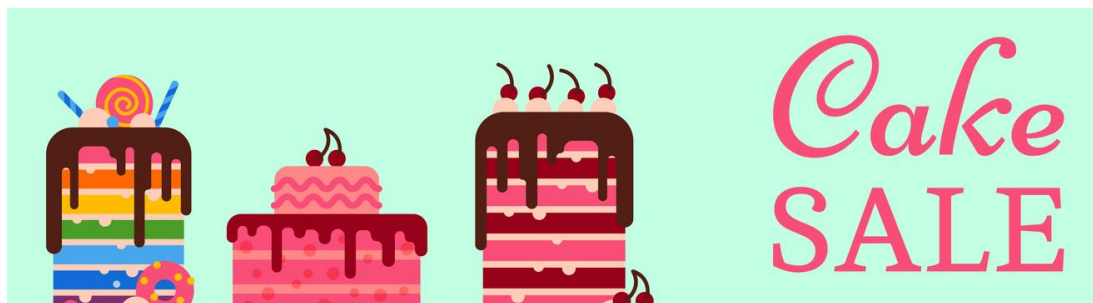
We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More [Year 5 Fractions](#) resources.

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

Multiply Unit Fractions by an Integer

1. Year 5 are hosting a coffee and cake sale for a charity.



Between one and two cakes were eaten.

The number of people who came is an even number.

Each person that came had one slice of cake.

Investigate the fraction the cakes could have been cut into and how many people came to the cake sale. Write the multiplication sentences to show your working.

DP

2. Hannah and Mike are playing darts. They have chosen 3 darts each which have landed in different sections.

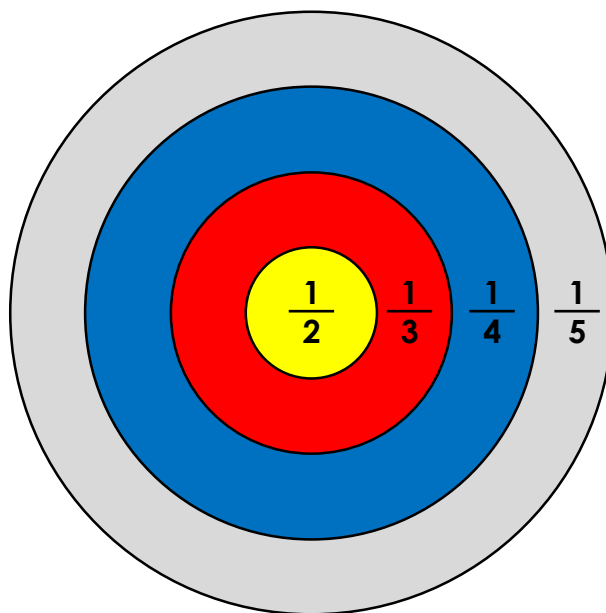
Dart	Multiplier
Green 	2
Blue 	3
Pink 	4
Yellow 	5
Orange 	6

Hannah scored

$$3 \frac{1}{4}$$

Mike scored

$$4 \frac{1}{2}$$

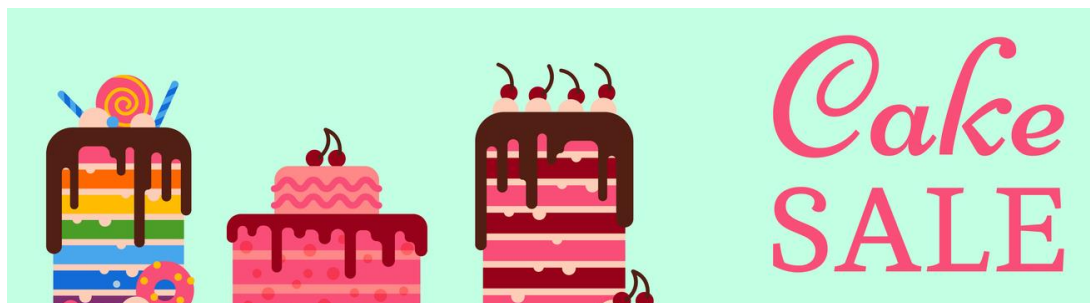


Explore the darts they could have chosen.

DP

Multiply Unit Fractions by an Integer

1. Year 5 are hosting a coffee and cake sale for a charity.



Between one and two cakes were eaten.

The number of people who came is an even number.

Each person that came had one slice of cake.

Investigate the fraction the cakes could have been cut into and how many people came to the cake sale. Write the multiplication sentences to show your working.

Various answers, for example: $\frac{1}{4} \times 6 = 1\frac{1}{2}$

DP

2. Hannah and Mike are playing darts. They have chosen 3 darts each which have landed in different sections.

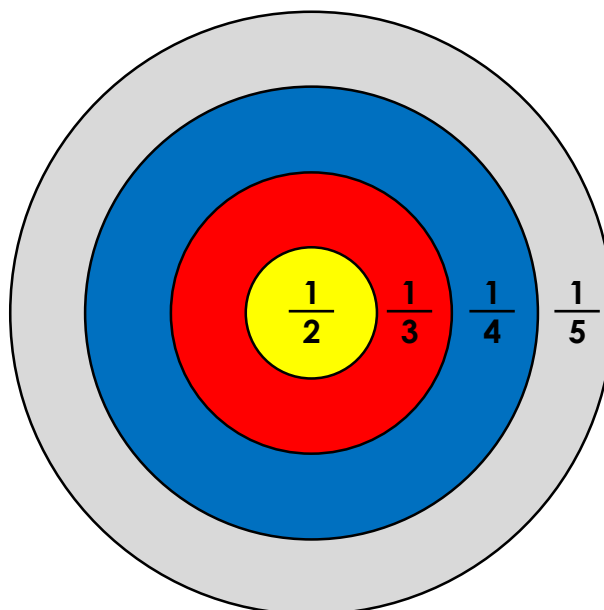
Dart	Multiplier
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Hannah scored

$$3\frac{1}{4}$$

Mike scored

$$4\frac{1}{2}$$



Explore the darts they could have chosen.

Various answers, for example: Hannah chose yellow $\frac{1}{4} \times 5 = 1\frac{1}{4}$; blue $\frac{1}{3} \times 3 = 1$; green $\frac{1}{2} \times 2 = 1$. Mike chose orange $\frac{1}{3} \times 6 = 2$; pink $\frac{1}{4} \times 4 = 1$; blue $\frac{1}{2} \times 3 = 1\frac{1}{2}$.

DP