

Dr Fog Presents

Which fraction is bigger?

Year 7 (National Numeracy Strategy)
(Based on DFEE Sample Lessons)



Resources

- Demonstration calculator
- Calculators.



Mental Learning Objective

- I know every fraction can be seen as a division.



Mental Learning Task



- Here are three pizzas.
- There are four children.
- How much will each get if they are shared equally?



Mental Learning Task



- Three pizzas shared among 4 children is
- 3 divided by 4.
- This means each gets $\frac{3}{4}$ of a pizza.
- $3 \div 4$ is the same as writing $\frac{3}{4}$.



Mental Learning Task



**Every fraction
can be seen as
a division.**



Mental Learning Objective

- I know every fraction can be seen as a division.



Main Learning Objective

- I can compare fractions using a number line.
- I can compare fractions by giving them the same denominator.
- I can compare fractions by converting them to decimals.



Key idea

**I know there are
three ways of
comparing a fraction.**



Main Learning Task

5

7

6

8

- Which of these fractions is bigger?
- How do you know?



Main Learning Task

- You could
 - Make both fractions to 1 and compare these differences.
 - Use equivalent fractions, using the same denominator.
 - Think of each fraction as a division and use a calculator to find their decimals equivalents.



Main Learning Task

- We will look at each of these methods in turn.
- If we know more than one method, we can use one to solve a question.
- We can then use another method to check the answer,



Main Learning Task

- The first method uses an empty line.

5

6

1

7

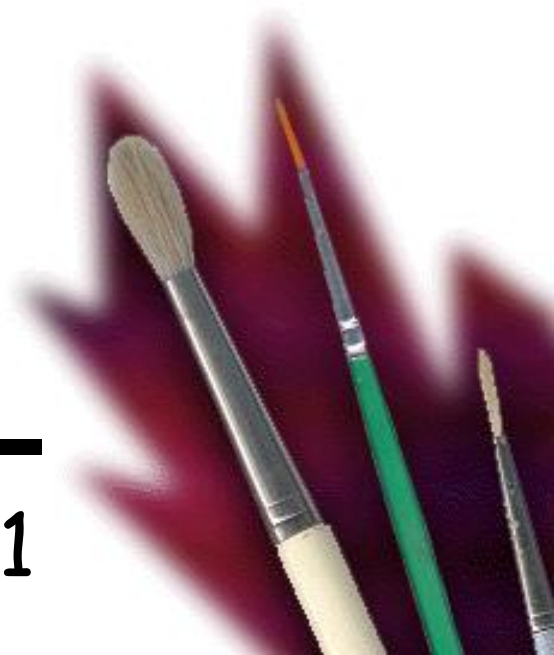
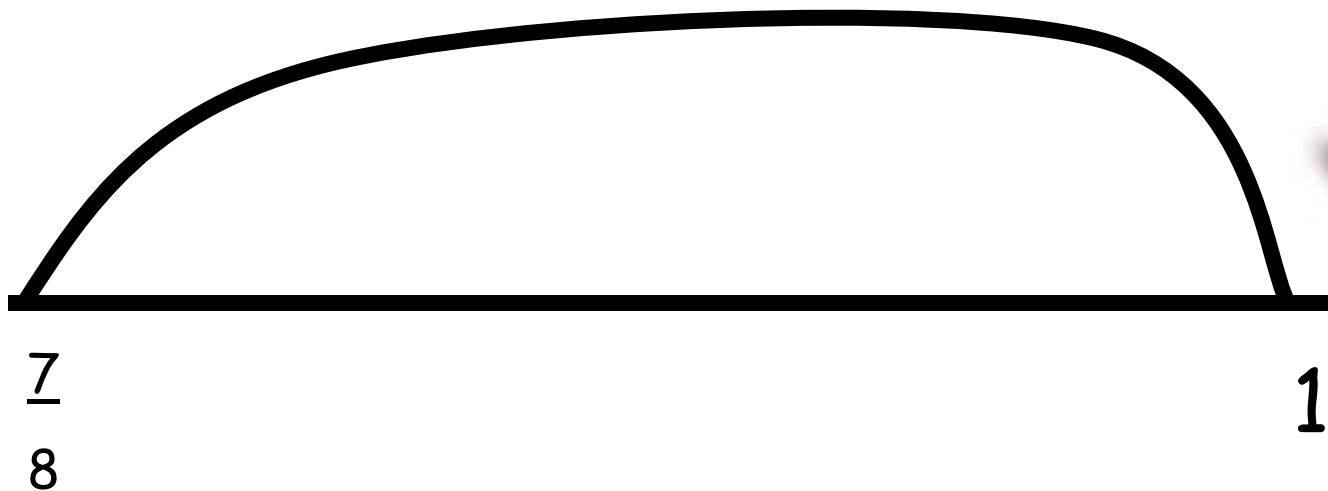
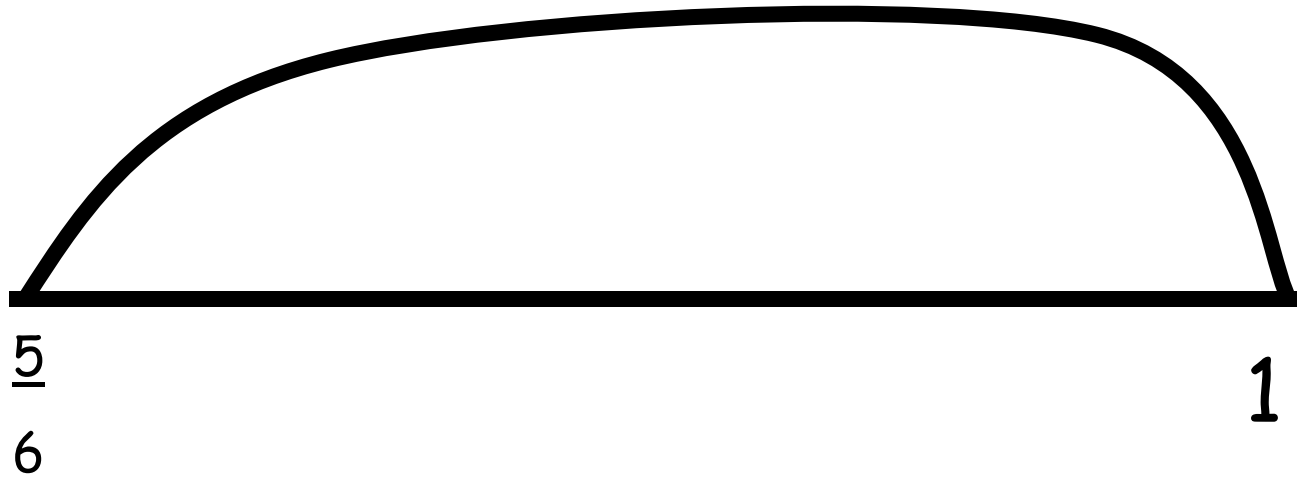
8

1



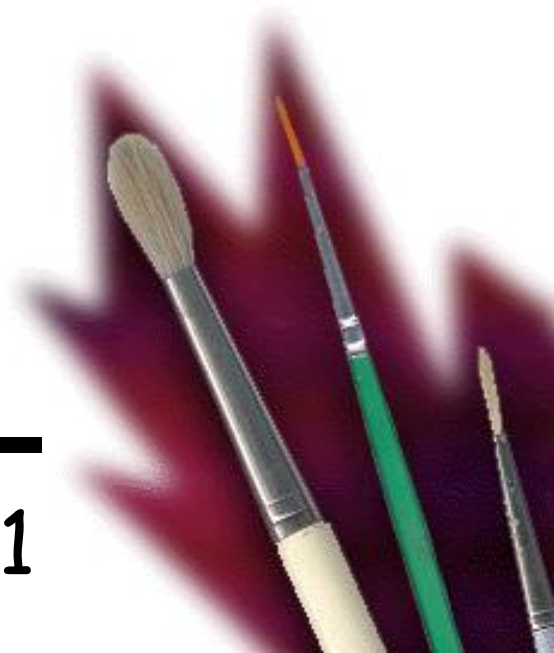
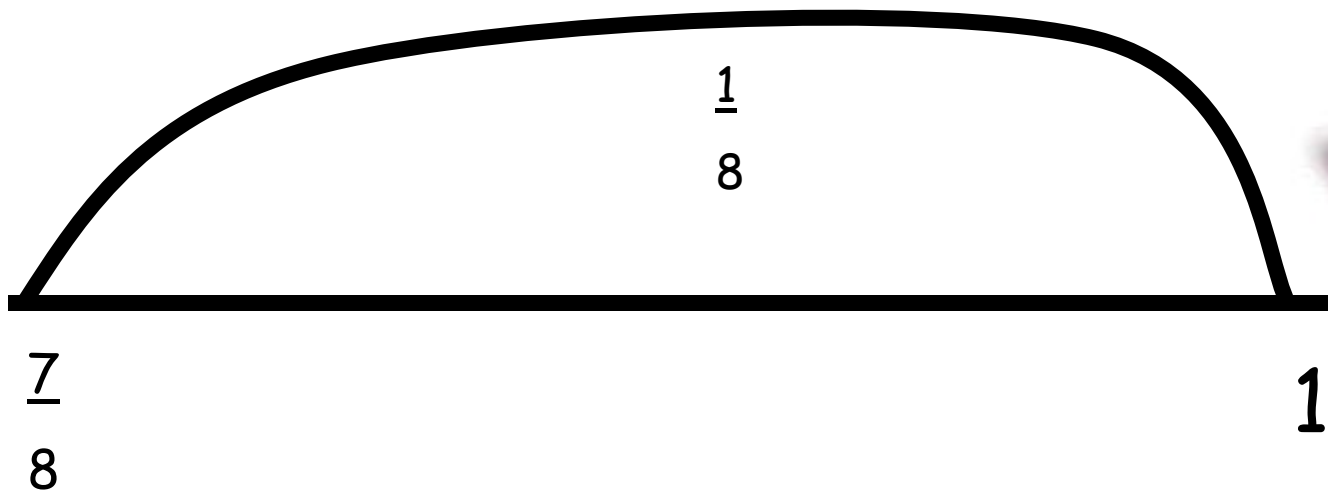
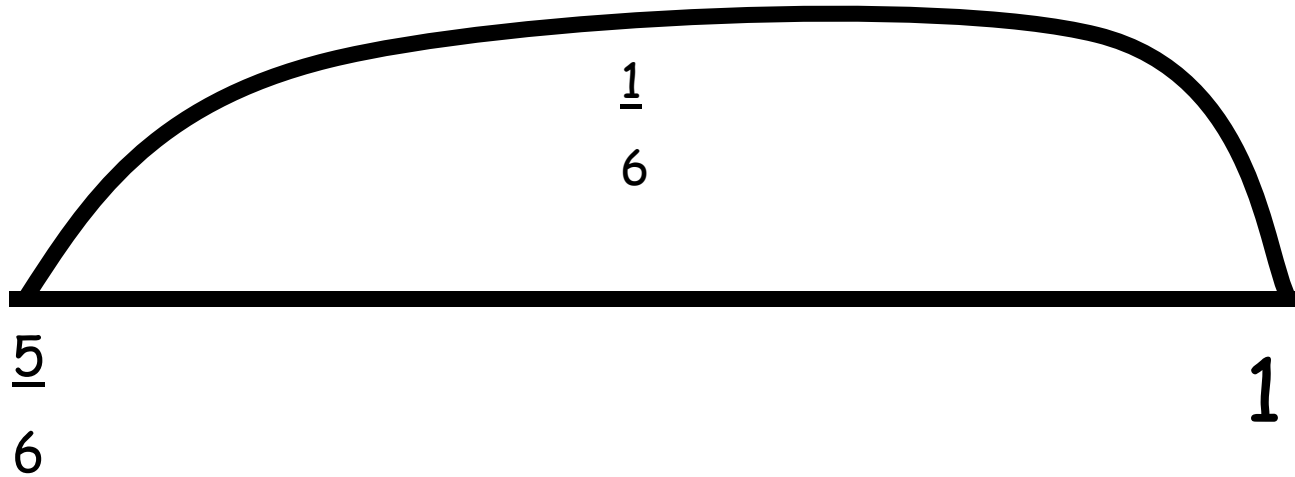
Main Learning Task

- How large is each step to 1?



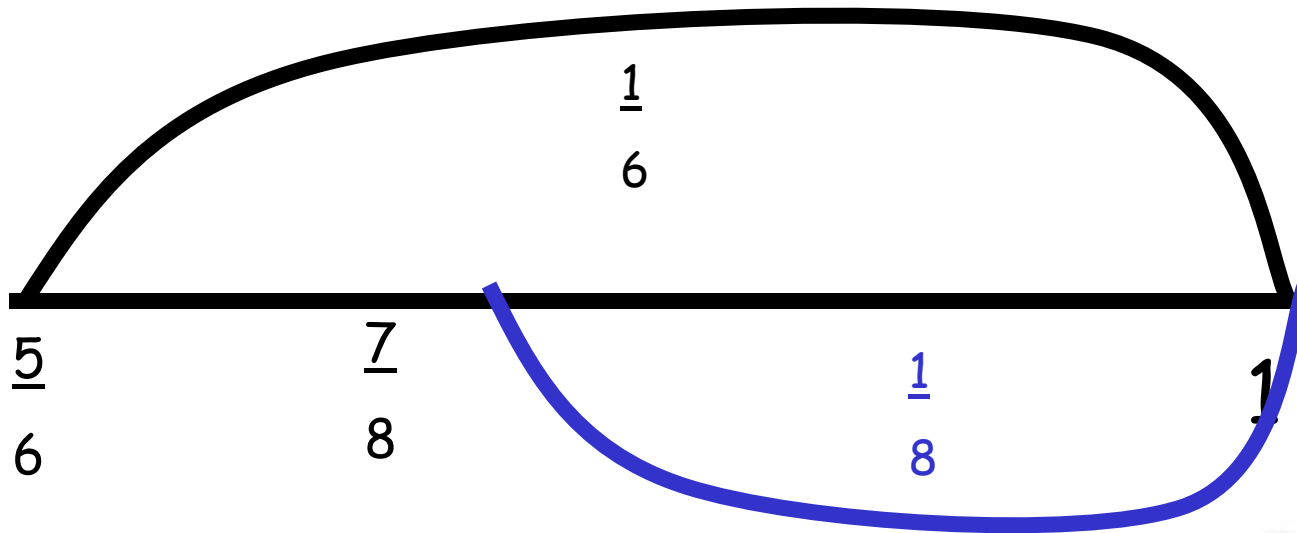
Main Learning Task

- Which one is closer to 1?



Main Learning Task

- Which one is closer to 1?



- As $\frac{1}{8}$ is smaller than $\frac{1}{6}$, we know $\frac{7}{8}$ is bigger than $\frac{5}{6}$ as it is closer to 1.



Main Learning Task

- The second method requires more explanation.
- You need to find whether $\frac{5}{6}$ or $\frac{7}{8}$ is bigger and one way is to turn them into fractions with the same denominator.



Main Learning Task

- For the denominator, you need to find a number that 6 and 8 will both go into exactly.



Main Learning Task

- List the multiples of 6 and 8 until there is at least one number that features in both sets...

6	12	18				
8	16	24				



Main Learning Task

- What is the smallest number in both sets of numbers?

6	12	18				
8	16	24				



Main Learning Task

- We now need to turn both fractions into their equivalents with 24 as a denominator.

6	12	18				
8	16	24				



Main Learning Task

- Find the equivalent fractions.
- Show the workings on the board.

$$\frac{5}{6} \longrightarrow \frac{\quad}{24}$$

$$\frac{7}{8} \longrightarrow \frac{\quad}{24}$$



Main Learning Task

- Which fraction was bigger?

$$\frac{5}{6} \longrightarrow \frac{\quad}{24}$$

$$\frac{7}{8} \longrightarrow \frac{\quad}{24}$$



Main Learning Task

- The third method requires either a class size calculator or the teacher to click Start button in windows
- Programs
- Accessories
- Calculator.



Main Learning Task

- I am going to think of each fraction as a division and use a calculator to find the difference.



Main Learning Task

- $5/6$ is the same as 5 divided by 6...
which is what?
- $7/8$ is the same as 7 divided by 8...
which is what?
- Which is bigger?
- How do you know?



Main Learning Task

- Choose a pair of fractions and find which of the two are larger.
- You may choose any method you want.
- Do try the new methods.
- Check your reasoning by using a different method



Main Learning Task

- How many can you do before the end of the lesson?

1 or 3
4 8

2 or 3
3 4

4 or 5
9 8



Main Learning Objective

- I can compare fractions using a number line.
- I can compare fractions by giving them the same denominator.
- I can compare fractions by converting them to decimals.



Plenary

- What have you found today?
- Which method did you use?
- What were the answers?



Review of Key Idea

- I know there are three ways of comparing a fraction.
- Did you learn this today?



Where Can I Find More Resources Like This?

- You can now visit my teaching resource website at <http://www.DrFog.co.uk>
- You can [click here](#) to search for more of my teaching resources.
- [Click here](#) to visit my **YES** shop!

