

Notes for parents.

The purpose of the activity is to help your child to:

- Convert fractions into decimals
- Locate decimals on a number line

Here is what to do:

Print a copy of the last page which is a recording sheet for the game. You will also need a calculator.

Introduce the rules to the game:

1. There are two players, yourself and your child.
2. Begin by choosing which number line on the recording sheet each player will try to complete. Write one name in each box. The first player to complete their number line wins.
3. Players take turns to cross off two numbers from the Number Bank. They use the numbers to write a fraction. The fraction must be equal to one or less. That means the top number (numerator) cannot be more than the bottom number (denominator). For example, $\frac{8}{8}$ is okay and is equal to one, $\frac{0}{8}$ is okay and equal to zero, $\frac{3}{5}$ is okay and equal to 0.6. Zero cannot be used as a denominator.
4. Each time a player creates a fraction they use the calculator to change that number into a decimal. For example, $\frac{4}{8} = 4 \div 8 = 0.5$. They cross off that decimal on their number line.
5. If a player makes a fraction that converts to a decimal they have already crossed out they lose that turn and the numbers in the Number Bank they used are uncrossed. Players can only use numbers in the Number Bank that are not crossed off.

Points to note:

Fluency in converting fractions to decimals and vice versa is important to calculation and estimation. For example, $0.4 \times 0.6 \neq 2.4$ (a common error). Thinking of 0.4 as 4 tenths and 0.6 as six tenths helps a child realise that $0.4 \times 0.6 = \frac{4}{10} \times \frac{6}{10} = \frac{24}{100}$ which is 0.24.

Ordering decimals is an indicator of understanding of the size of these numbers. A common issue is that children treat decimals like whole numbers. This shows in thinking that 0.8 is less than 0.75 because 75 is greater than 8. Experiences with decimals in number line form can support children in identifying which decimal is greater or less and why.



Notes for parents (2). Activity next page.

Familiarity with comparing fractions with different denominators also helps with number sense for decimals. The game encourages children (and parents) to look for other ways to create the same fraction. For example, suppose a child wants to make a fraction equivalent to 0.6 but all the sixes and tens are crossed out. Recognising that six tenths is equivalent to three fifths can make crossing out 0.6 possible.

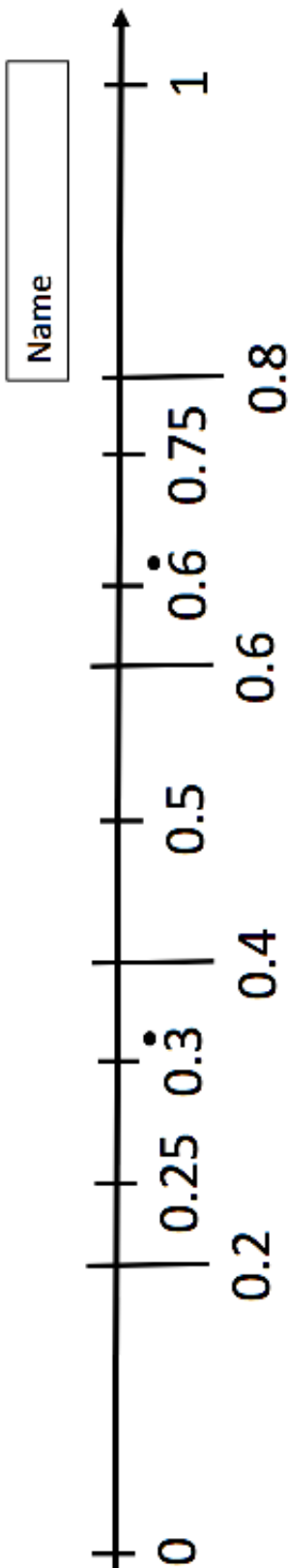
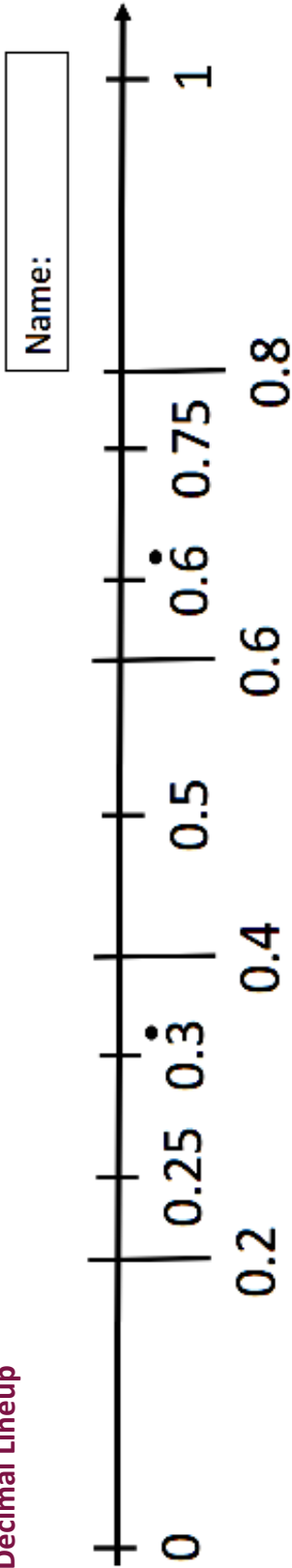
Linking equivalent fractions using symbols can support children to see number patterns. In the equation below both 6 and 10 are halved (multiplied by $\frac{1}{2}$) to form $\frac{3}{5}$.

$$\frac{6}{10} = \frac{3}{5}$$

The objective of the game is for children to acquire fluency in converting fractions to decimals and recognising equivalent fractions. Repetition of the game will help your child learn and practice these understandings.



Decimal Lineup



Number Bank

0	1	2	3	4	5	6	7	8	9	10
0	1	2	3	4	5	6	7	8	9	10
	1	2	3	4	5	6	8	9	10	10
	1	2	3	4	5	6	8	9	10	10
	1	2	3	4	5	6	8	9	10	10