

INTERVENTION

Multiplicative Relationships Between Fractions

Each Intervention Anchor Chart contains steps to allow the child to investigate independently.

Children investigating an Intervention may be provided with the Intervention Anchor Chart as a guide to follow as they investigate independently.

Children investigating an Intervention may have their progress recorded in the Progress Sheet.

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Progress Sheet [page 12](#)



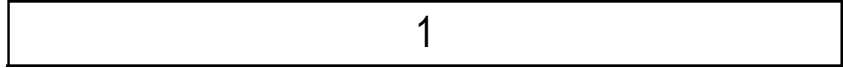
Multiplicative Relationships between Fractions

- Halves (Fractions and Decimals 8)

RESOURCES: pencil, either A4 paper and a ruler to allow children to create their own equal-sized strips, or Blackline Master strips, scissors, Maths book

Have a strip of paper.

Label it 1.



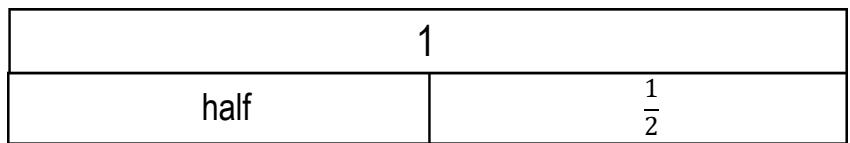
Explain that this is the size of the 1 that we will create fractions from.

Have another same-sized strip of paper.

If you divide the strip into 2 equal parts, what fraction will each part be?

Divide the strip in half.

Label each half and place them under the 1 to create a fraction wall.



Why is this called a half?

What is it half as big as?

Explain that a half is half of 1.

Explain $\frac{1}{2} = \frac{1}{2}$ of 1

Reflection: How can we create and describe halves multiplicatively?



Multiplicative Relationships between Fractions

- Quarters (Fractions and Decimals 8)

RESOURCES: pencil, either A4 paper and a ruler to allow children to create their own equal-sized strips, or Blackline Master strips, scissors, Maths book

Have a fraction wall with 1 and halves.

1	
half	$\frac{1}{2}$

Have another same-sized strip of paper.

If you divide the strip into 4 equal parts, what fraction will each part be?

What fraction will we divide the strip into first?

Divide the strip in half.

What will we do to our halves to make quarters?

Divide the halves in half.

Label each quarter and place them under the halves to create a fraction wall.

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

Why is this called a quarter?

What is it a quarter as big as?

Explain that a quarter is a quarter of 1.

Explain $\frac{1}{4} = \frac{1}{4}$ of 1

What fraction of a half is a quarter?

Explain that a quarter is half of a half.

Explain $\frac{1}{4} = \frac{1}{2}$ of $\frac{1}{2}$

Reflection: How can we create and describe quarters multiplicatively?



Multiplicative Relationships between Fractions - Eighths (Fractions and Decimals 8)

RESOURCES: pencil, either A4 paper and a ruler to allow children to create their own equal-sized strips, or Blackline Master strips, scissors, Maths book

Have a fraction wall with 1, halves, quarters.

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

Have another same-sized strip of paper.

If you divide the strip into 8 equal parts, what fraction will each part be?

What fraction will we divide the strip into first?

Divide the strip in half.

What will we do to our halves to make eighths?

Divide the halves in half and then in half again.

Label each eighth and place them under the quarters to create a fraction wall.

1							
half				$\frac{1}{2}$			
quarter	$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		
eighth	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

Why is this called an eighth?

What is it an eighth as big as?

Explain that an eighth is an eighth of 1 and $\frac{1}{8} = \frac{1}{8}$ of 1

What fraction of a quarter is an eighth?

Explain that an eighth is half of a quarter and $\frac{1}{8} = \frac{1}{2}$ of $\frac{1}{4}$

What fraction of a half is an eighth?

Explain that an eighth is quarter of a half and $\frac{1}{8} = \frac{1}{4}$ of $\frac{1}{2}$

Reflection: How can we create and describe eighths multiplicatively?



Multiplicative Relationships between Fractions - Fifths (Fractions and Decimals 8)

RESOURCES: pencil, either A4 paper and a ruler to allow children to create their own equal-sized strips, or Blackline Master strips, scissors, Maths book

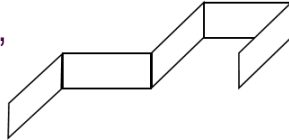
Have a fraction wall with 1, halves, quarters, eighths.

1							
half				$\frac{1}{2}$			
quarter		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$	
eighth	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

Have another same-sized strip of paper.

If you divide the strip into 5 equal parts, what fraction will each part be?

Estimate a fifth from each end, and a fifth in the centre to divide the strip in fifths.



Label each fifth and place them under the eighths to create a fraction wall.

1							
half				$\frac{1}{2}$			
quarter		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$	
eighth	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
fifth	$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$

Why is this called a fifth?

What is it a fifth as big as?

Explain that a fifth is a fifth of 1 and $\frac{1}{5} = \frac{1}{5}$ of 1

Reflection: How can we create and describe fifths multiplicatively?



Multiplicative Relationships between Fractions

- Tenths (Fractions and Decimals 8)

RESOURCES: pencil, either A4 paper and a ruler to allow children to create their own equal-sized strips, or Blackline Master strips, scissors, Maths book

Have a fraction wall with 1, halves, quarters, eighths, fifths.

1									
half					$\frac{1}{2}$				
quarter		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$	
eighth	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
fifth	$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$

Have another same-sized strip of paper.

If you divide the strip into 10 equal parts, what fraction will each part be?

What fraction could we divide the strip into first?

Divide the strip in fifths.

What will we do to our fifths to make tenths?

Divide the fifths in half.

What other fraction could we divide the strip into first?

Divide the strip in half.

What will we do to our halves to make tenths?

Divide the halves in fifths.

Label each tenth and place them under the fifths to create a fraction wall.

1									
half					$\frac{1}{2}$				
quarter		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$	
eighth	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
fifth	$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$
tenth	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$

Why is this called a tenth?

What is it a tenth as big as?

Explain that a tenth is a tenth of 1 and $\frac{1}{10} = \frac{1}{10}$ of 1

What fraction of a fifth is a tenth?

Explain that a tenth is half of a fifth and $\frac{1}{10} = \frac{1}{2}$ of $\frac{1}{5}$

What fraction of a half is a tenth?

Explain that a tenth is a fifth of a half and $\frac{1}{10} = \frac{1}{5}$ of $\frac{1}{2}$

Reflection: How can we create and describe tenths multiplicatively?



Multiplicative Relationships between Fractions

- Thirds (Fractions and Decimals 8)

RESOURCES: pencil, either A4 paper and a ruler to allow children to create their own equal-sized strips, or Blackline Master strips, scissors, Maths book

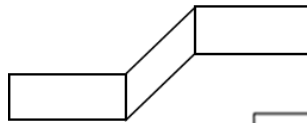
Have a fraction wall with 1, halves, quarters, eighths, fifths, tenths.

1							
half				$\frac{1}{2}$			
quarter	$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		
eighth	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
fifth	$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$

Have another same-sized strip of paper.

If you divide the strip into 3 equal parts, what fraction will each part be?

Estimate a third from each end, to divide the strip in thirds.



Label each third and place them under the tenths to create a fraction wall.

1									
half					$\frac{1}{2}$				
quarter	$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		
eighth	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
fifth	$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		
tenth	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$
third	$\frac{1}{3}$			$\frac{1}{3}$			$\frac{1}{3}$		

Why is this called a third?

What is it a third as big as?

Explain that a third is a third of 1 and $\frac{1}{3} = \frac{1}{3}$ of 1

Reflection: How can we create and describe thirds multiplicatively?



Multiplicative Relationships between Fractions

- Sixths (Fractions and Decimals 8)

RESOURCES: pencil, either A4 paper and a ruler to allow children to create their own equal-sized strips, or Blackline Master strips, scissors, Maths book

Have a fraction wall with 1, halves, quarters, eighths, fifths, tenths, thirds.

1									
half					$\frac{1}{2}$				
quarter			$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		
eighth	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
fifth		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
tenth	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$
third			$\frac{1}{3}$			$\frac{1}{3}$			

Have another same-sized strip of paper.

If you divide the strip into 6 equal parts, what fraction will each part be?

What fraction could we divide the strip into first?

Divide the strip in thirds.

What will we do to our thirds to make sixths?

Divide the thirds in half.

What other fraction could we divide the strip into first?

Divide the strip in half.

What will we do to our halves to make sixths?

Divide the halves in thirds.

Label each sixth and place them under the thirds to create a fraction wall.

1									
half					$\frac{1}{2}$				
quarter			$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		
eighth	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
fifth		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
tenth	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$
third			$\frac{1}{3}$			$\frac{1}{3}$			
sixth	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$

Why is this called a sixth?

What is it a sixth as big as?

Explain that a sixth is a sixth of 1 and $\frac{1}{6} = \frac{1}{6}$ of 1

What fraction of a third is a sixth?

Explain that a sixth is half of a third and $\frac{1}{6} = \frac{1}{2}$ of $\frac{1}{3}$

What fraction of a half is a sixth?

Explain that a sixth is a third of a half and $\frac{1}{6} = \frac{1}{3}$ of $\frac{1}{2}$

Reflection: How can we create and describe sixths multiplicatively?



Multiplicative Relationships between Fractions

- Twelfths (Fractions and Decimals 8)

RESOURCES: pencil, either A4 paper and a ruler to allow children to create their own equal-sized strips, or Blackline Master strips, scissors, Maths book

Have a fraction wall with 1, halves, quarters, eighths, fifths, tenths, thirds, sixths.

Have another same-sized strip of paper.

If you divide the strip into 12 equal parts, what fraction will each part be?

What fraction could we divide the strip into first?

Divide the strip in thirds.

What will we do to our thirds to make twelfths?

Divide the thirds in half and in half again.

What other fraction could we divide the strip into first?

Divide the strip in half.

What will we do to our halves to make twelfths?

Divide the halves in thirds then in half.

Label each twelfth and place them under the sixths to create a fraction wall.

Why is this called a twelfth?

What is it a twelfth as big as?

Explain that a twelfth is a twelfth of 1 and $\frac{1}{12} = \frac{1}{12}$ of 1

What fraction of a sixth is a twelfth?

Explain that a twelfth is half of a sixth and $\frac{1}{12} = \frac{1}{2}$ of $\frac{1}{6}$

What fraction of a half is a twelfth?

Explain that a twelfth is a sixth of a half and $\frac{1}{12} = \frac{1}{6}$ of $\frac{1}{2}$

What fraction of a third is a twelfth?

Explain that a twelfth is a quarter of a third and $\frac{1}{12} = \frac{1}{4}$ of $\frac{1}{3}$

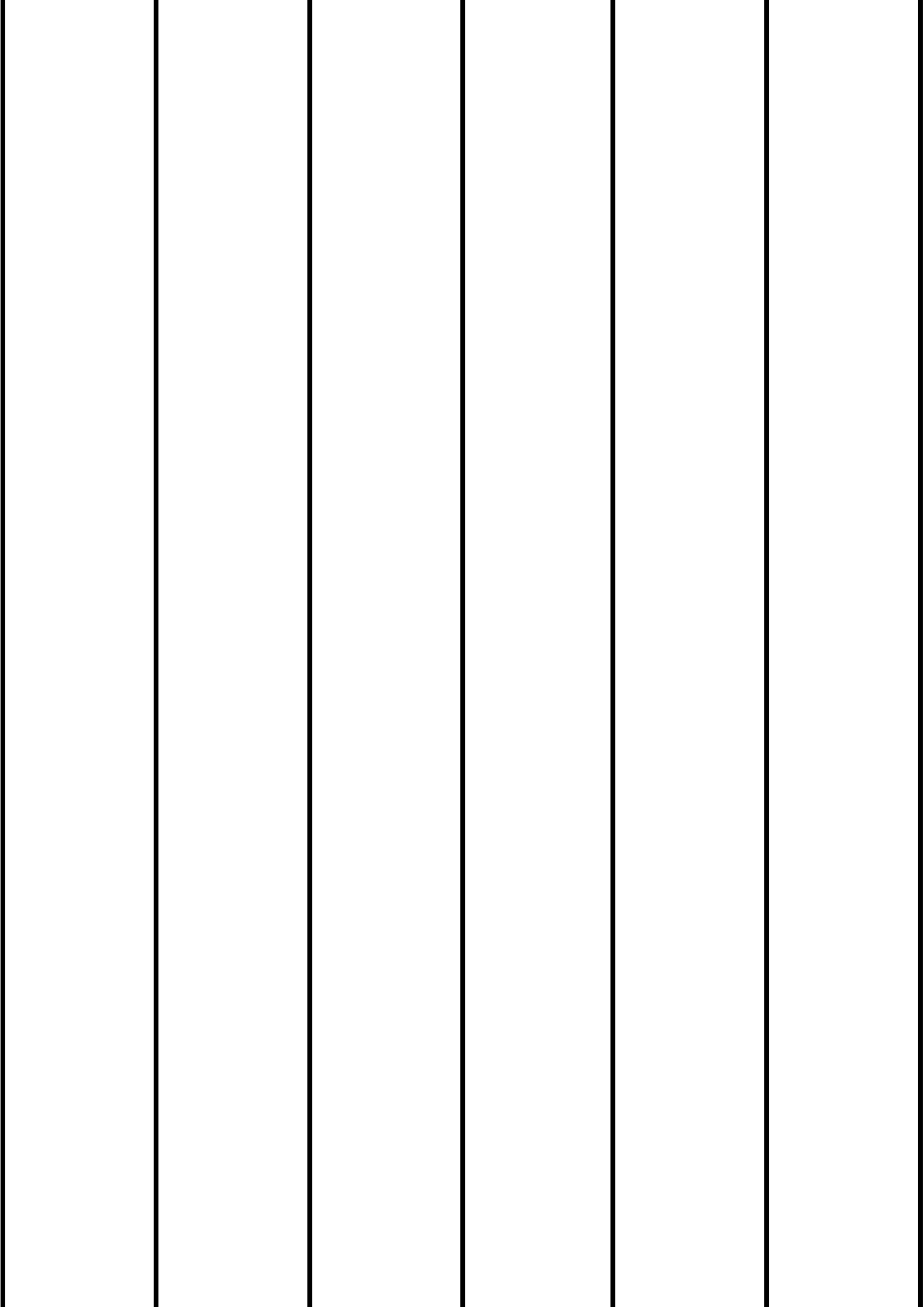
What fraction of a quarter is a twelfth?

Explain that a twelfth is a third of a quarter and $\frac{1}{12} = \frac{1}{3}$ of $\frac{1}{4}$

Reflection: How can we create and describe twelfths multiplicatively?

1											
half						$\frac{1}{2}$					
quarter			$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$		
eighth	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
fifth			$\frac{1}{5}$			$\frac{1}{5}$			$\frac{1}{5}$		
tenth	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$
third				$\frac{1}{3}$				$\frac{1}{3}$			
sixth	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$

1											
half						$\frac{1}{2}$					
quarter			$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$		
eighth	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
fifth			$\frac{1}{5}$			$\frac{1}{5}$			$\frac{1}{5}$		
tenth	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$
third				$\frac{1}{3}$				$\frac{1}{3}$			
sixth	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$
twelfth	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$





Progress Sheet

Child's Details (Name and Intervention Concept):

Each day, record the child's progress. This record, along with the child's recordings and explanations, can be used as: **ASSESSMENT OF LEARNING (SUMMATIVE)** – at any point in time the child's demonstrated level of understanding may be recorded for tracking and reporting purposes.

ASSESSMENT FOR LEARNING (FORMATIVE) – the teacher may use the child's demonstrated levels of understanding over time to plan, implement and evaluate further teaching and learning. Recording daily will allow the teacher to identify irregular learning progress, where the child demonstrates understanding in one lesson but not in subsequent lessons. This record can accompany an IEP, and a referral for further support for the child.

ASSESSMENT AS LEARNING (FORMATIVE) – the child may be shown this record to allow them to identify their learning progress. The teacher will use their teacher professional judgment to decide whether this is appropriate.

Date									
Number size Investigated									
Independent or with support?									

Date									
Number size Investigated									
Independent or with support?									

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Date									
Number size Investigated									
Independent or with support?									