Partitioning Ph5 U1 Supporting Resources

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What is quantity? Frayer model	Q1c	One per pair
Multi-language math vocabulary investigation: Blank chart	Q1d	One per student OR
Multi-language math vocabulary Investigation: Sample chart	Q1d	One per pair
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U1 Skills & knowledge checklist		One per class

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Q1a & Q1b Anecdotal notes

What can we call these equal parts? (F)
What is the connection between the strips and the symbols we use to represent them? (F)

- Dotheynoticethatthemorepiecestheyhave,thesmaller the individual pieces are?
- Dotheynoticethedenominatorincreasesastheygetmore pieces?
- Cantheyconnectthestrips/wordstothesymbols?

- Do they create unequal sized pieces? (rule out fine motor issues).
- Do they notice two fourths is equal in size to one half? Or other equivalents?

Throughout this engagement evaluate the connections the students are making in reference to understanding U1: The greater the number of equal parts, the smaller each part becomes.

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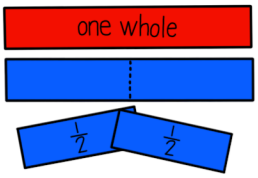
Q1a & Q1b Fraction strip creation instructions and thinking

Your teacher will provide you with four strips of card the same size, in four different colours.



1. On the first coloured strip write 'one whole'.

2. Fold the next strip in half and tear gently along the fold. What fraction would you label each part? Why?

What is the connection between what you have written and the two parts of the strip?

3. Fold the third strip in half and in half again, then tear gently along the folds.

What can we call these equal parts? Label each part.

What is the connection between what you have written and the equal parts of this strip?

4. Fold the final strip in half three times. Repeat each fold individually to ensure they tear well.

What can we call these equal parts? Label each of the eight parts.

What is the connection between what you have written and the equal parts of the strip?

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Fraction Strips game instructions

Supplies

- A set of fraction strips for each player.
- One dice labeled as follows:
  - One face: ½
  - Two faces: ¼
  - Three faces: ⅛
- Paper for recording results



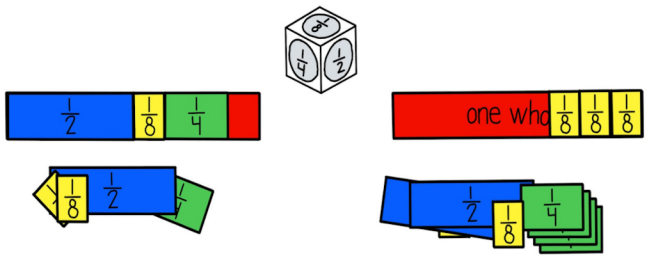
Goal

Be the first to exactly fill your board to make a row of pieces equal to one whole.

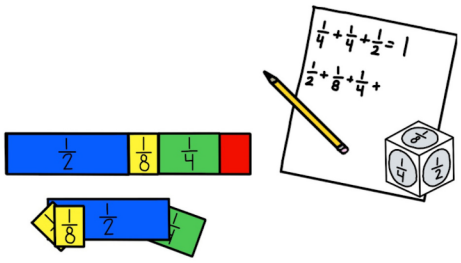
How to play

Use your 'one whole' strip as your game board.

1. To fill your board, take turns rolling the dice and revealing which fraction strip you can take. For example, If it lands on 1/4, take one of your fourths and place at the left end of your game board.
Note: If the fraction strip is bigger than the space you have left, then you put that strip back and it is the next player's turn. In the example below, the player on the left already has 1/2, 1/8, and 1/4 on their board. If they roll 1/2 again, will it fit in that small red space?No, so it is the next player's turn.
The winner is the first player to fill their board exactly - to make a row of pieces equal to one whole.



2. Each time you make one whole, record your 'board' as a number sentence in your notebook or on the record paper, e.g. $\frac{1}{4} + \frac{1}{2} + \frac{1}{4} = 1$



Remember to keep your set of fraction strips in an envelope or plastic sleeve for future use!

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Q1c What is quantity? Photos

What words can you use to describe the amount of oranges or amount of liquid in each photo?



Steven Lee



Eiliv-Sonas Acero



Mockup Graphics



Erik Mclean



Engin Akyurt

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Q1c What is quantity?

Write a definition of *quantity* with a partner and provide several different examples of quantity.

What is *quantity*? Definition:	Give several example of *quantity*
What is quantity in other languages that you speak?	

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Q1d Multi-language Math Vocabulary Investigation

What names are given to the parts of a fraction?

Language	Word for numerator	Meaning in English of word root	Word for denominator	Meaning in English of word root
e.g. German	*Zähler*	*Counter*	*Nenner*	*Namer*

What do you notice about the word root for *Numerator* in many languages?	What do you notice about the word root for *Denominator* in many languages?

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Q1d Multi-language math vocabulary investigation

What names are given to the parts of a fraction?

Language	Word for Numerator	Meaning in English of word root	Word for Denominator	Meaning in English of word root
German	*Zähler*	*count*	*Nenner*	*name*
Norwegian	*teller*	*count*	*nevner*	*name*
Romanian	*numarator*	*count*	*numitor*	*name*
Polish	*licznik ułamka*	*number*	*mianownik*	*name*
Indonesian	*pembilang*	*count*	*penyebut*	*cause*
Croatian	*brojnik*	*number*	*nazivnik*	*name*
Russian	*числитель*	*count*	*знаменатель*	*know, sign*
Vietnamese	*tử số*	*number*	*mẫu số*	*sample*

What do you notice about the word root for *Numerator* in many languages?	What do you notice about the word root for *Denominator* in many languages?

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Q1d Which number is the numerator and which is the denominator in this fraction?

$\frac{2}{3}$	This is the It represents:	Draw the fraction here.
	This is the _____. It represents:	

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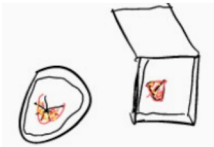
Q1e Numerator & denominator comparison chart

Name:

	Draw the fraction	Write the fraction	What does the numerator represent?	What does the denominator represent?
The pizza was cut into 8 pieces Ahmed ate 6 pieces.		$\frac{6}{8}$	The 6 pieces of pizza Ahmed ate.	The 8 pieces the pizza was cut into.
My dog had 8 puppies. So far we have found homes for 3 of them.				
In my spelling test I got 6 out of 10 correct.				
2 friends share 1 apple.				

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	Draw the fraction	Write the fraction	What does the numerator represent?	What does the denominator represent?
The cake was divided into 4 equal parts, one of which had already been eaten.				

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U1 Generalization

Generalization U1

Generalize

In a fraction, what do the numerator and denominator represent?

I understand that ...

Generalization U1

Generalize

In a fraction, what do the numerator and denominator represent?

I understand that ...

Generalization U1

Generalize

In a fraction, what do the numerator and denominator represent?

I understand that ...

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U1-3 Skills & knowledge checklist

Student name:	K1. The numerator is the top number and the denominator is the bottom number of a fraction.	S1. Add and subtract fractions that have the same denominator and record the operation using fraction notation.	S2. Compare and order fractions.	S4. Solve problem situations involving fractions of a shape and record the process and result using fraction notation.

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