


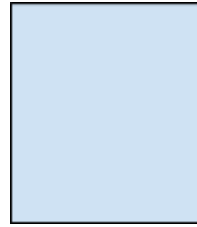


**Number Sense 4+ B (fractions) INA Support Document**

Content Covered: Fraction Concepts

These skills are foundational skills for students to develop as flexible thinkers. Students must be able to understand the value of number and how to decompose it to form flexible strategies to improve computational fluency. Many of the questions in the fraction portion of the INA overlap into all areas of fraction concepts.

Concepts	Questions	Instructional Strategies to help build students foundational skills	Task Examples- The tasks are listed in one content area but they cover all or most of the fraction concepts.
Fractions and decimals are numbers that represent an amount or quantity	Embedded in all questions		
Fractions and decimals can represent parts of a region, set or linear model.	3, 4, 5, 10, 11 Collaborative Task 1 Collaborative Task 2	<p><b>Number Talk:</b> <a href="#">Number Talk Examples and Overview</a> and <a href="#">Sherry Parrish Descriptive Video of Number Talks</a>. Using the <a href="#">fraction Subitizing cards</a> lead number talks with cards similar to the card below.</p> <p>Where would <math>\frac{1}{2}</math>, <math>\frac{1}{3}</math>, <math>\frac{3}{4}</math>, be placed on the number line? How do you know?</p>  <p><b>Number Talk</b> Using group set have students identify different parts of the whole</p>  <p><math>\frac{1}{2}</math> ? <math>\frac{1}{4}</math> ?</p> <p>Can you see ____ of the whole? Can you see ____ in a different way? How can you prove your thinking?</p>  <p><b>Number talk</b></p> <p>Can you shade ____ part of the whole? How many different ways can you make ____?</p>	<a href="#">Spiralling Decimals</a> - Ordering decimals using a non-linear model.



### Clothesline Math

Use the following cards to explore the value of decimals and fractions

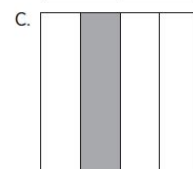
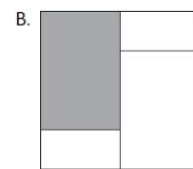
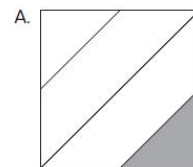
[Grade 4 Clothesline Fraction Cards](#)

Fraction parts and decimals are equal shares or equal sized portions of a whole or unit.

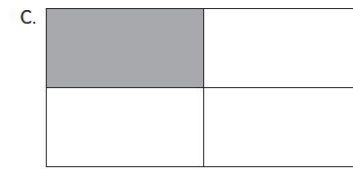
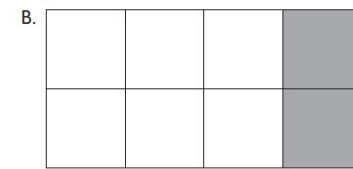
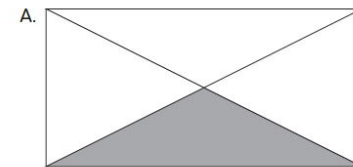
1, 2, 7, 8  
Performance Task 1,

### Number Talk

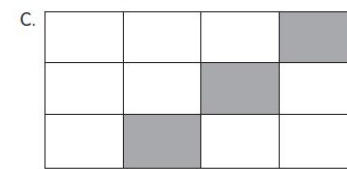
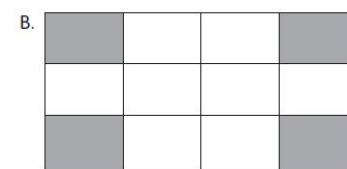
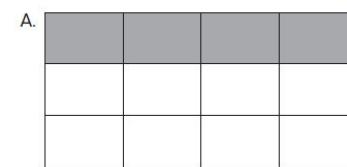
Which of these models represent  $\frac{1}{4}$  of the whole?  
How do you know?



Which of these models represent  $\frac{1}{4}$  of the whole?  
How do you know?



Which of these models represent  $\frac{1}{3}$  of the whole?  
How do you know?



From *Number Talks: Fractions, Decimals, and Percentages: Reproducibles*. Copyright © 2016 by Sherry Parrish and Ann Dominick. [www.mathsolutions.com](http://www.mathsolutions.com)

### Number Talk

[Greater than or less than?](#)

### Greater Than or Less Than?

Age 7 to 11 ★

5.□□ □ 5.□□

Use the symbols and numbers below to make the above number sentence correct.

< > 1 1 2 3

For example:

5.31 > 5.21

How many different sentences can you make?  
How will you know when you have found them all?

[Fair Feast](#) - Here is a picnic that Petros and Michael are going to share equally. Can you tell us what each of them will have?

[Halving](#)- These images show squares split in half:  
How might you check that each was correct?  
Can you think of more ways to split a square into two halves?

[Greater than or less than?](#) - Making true number sentences

[Sharing Bacon](#)

[A Mountainous decision](#)

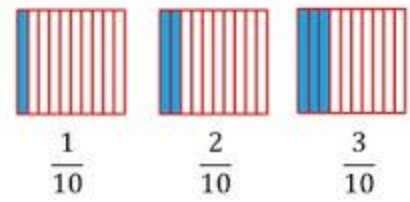
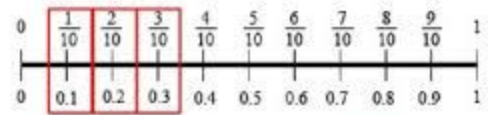
Understanding the relationship between fractions and decimals

6, 9

### Choral Counting - Choral counting explanation and examples

Counting in unit fractions.

- Choose the benchmark fractions to count in.
- Choose different numbers to start from instead of zero each time.
- Ensure that when students are counting that it is tied to a visual.

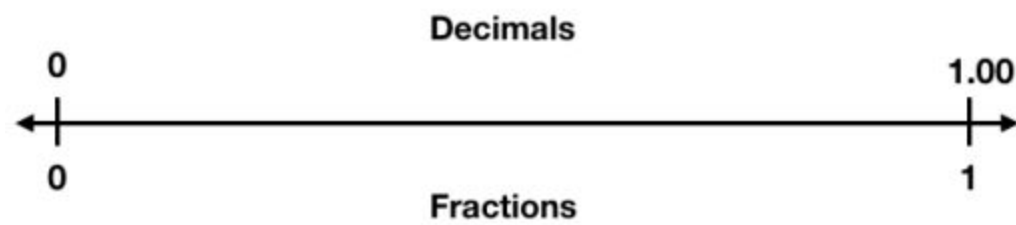


**Number Talk**

Given value of the decimal and the fraction place them on the number line. Explain your thinking.

Think of another decimal and fraction and where you would put them on the number line.

Ex.  $\frac{1}{4}$  and 0.35

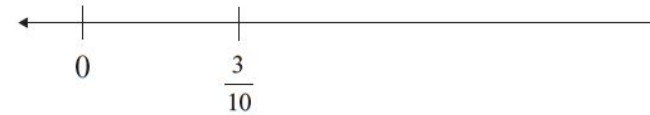
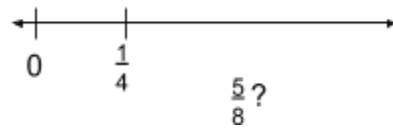


Estimating fractions with benchmarks

**Number Talks**

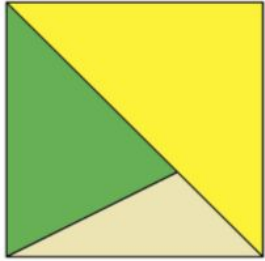
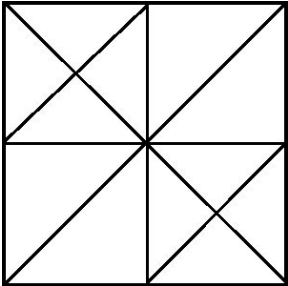
Where should  $\frac{4}{5}$  be placed? How do you know?

Where should \_\_\_\_ be placed on the? How do you know?



Where should  $\frac{5}{6}$  be placed? How do you know?



Use concrete and visual models	Performance Task 1	<p><b>Number of the day- Representing a fraction in many ways</b>          Have the students use manipulatives to represent the fraction that you present as the number in as many ways as possible. Make sure that they are always referencing the whole. One the students have represented have them make visual connections to the abstract values in their math journals or notebooks. This could also be done on whiteboards.</p> <p><b>Number Talk (Fraction Talks) - <a href="#">Fraction Talks Summary</a></b></p>  <p><b>Question examples:</b> (Find questions in the summary.)          What part of the fraction is a half?          Could you draw a line to make a quarter?</p> <p><a href="#">Click for more images</a></p>	<p><b><a href="#">Fraction Match</a></b>- Match different representations of fractions to each other.</p>
Equal partitioning	10, 7	<p><b>Student Focus:</b></p> <ul style="list-style-type: none"> <li>• When naming fractions they must have the correct amount of <b>equal</b> parts</li> <li>• Equal parts do NOT have to look the same, they just need the same area.</li> <li>• When looking at and comparing parts of a whole, the size of the whole must be the same size.</li> </ul> <p><b>Number Talk (Fraction Talks)</b></p>  <p><b>Number Talk</b>          Compare 0.4 and 6/10. What are the different ways the values can be represented?</p>	<p><b><a href="#">Fair Feast</a></b> - Here is a picnic that Petros and Michael are going to share equally. Can you tell us what each of them will have?</p> <p><b><a href="#">Chocolate</a></b> - "If the chocolate on the table I sit at is to be shared out equally when I sit down, which would be the best table to sit at?"</p> <p><b><a href="#">Fractional Triangles</a></b>- Given the square that is divided up into triangle how can you make quarters? Halves?</p> <p><b><a href="#">Byrony's Triangle</a></b> - After folding a sheet a paper, what fraction of the original square of paper is the shaded triangle?</p> <p><b><a href="#">Cupcake Task</a></b>- How will you share the cupcakes? Peter Liljedahl</p> <p><b>3 Act Task - <a href="#">Cheese and Crackers</a></b>  <a href="#">3 Act Math tip sheet</a></p> <p>3 Act Task- <a href="#">Cover It Up</a></p>