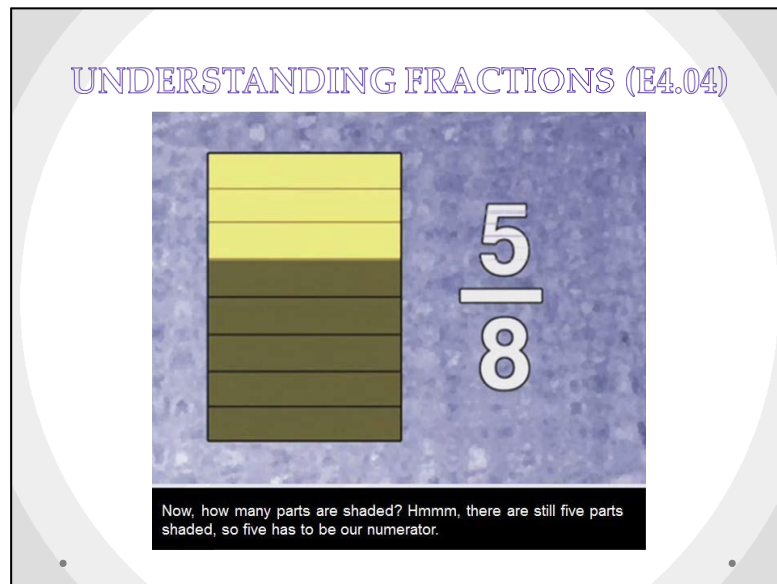
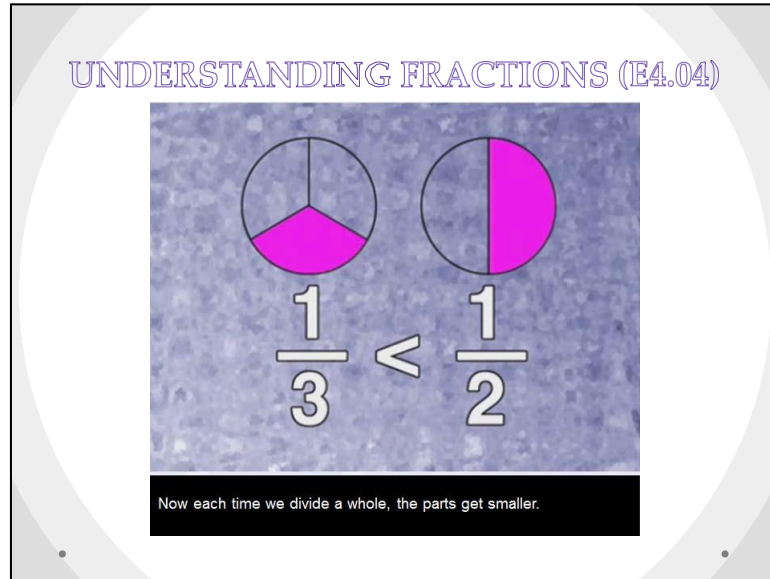




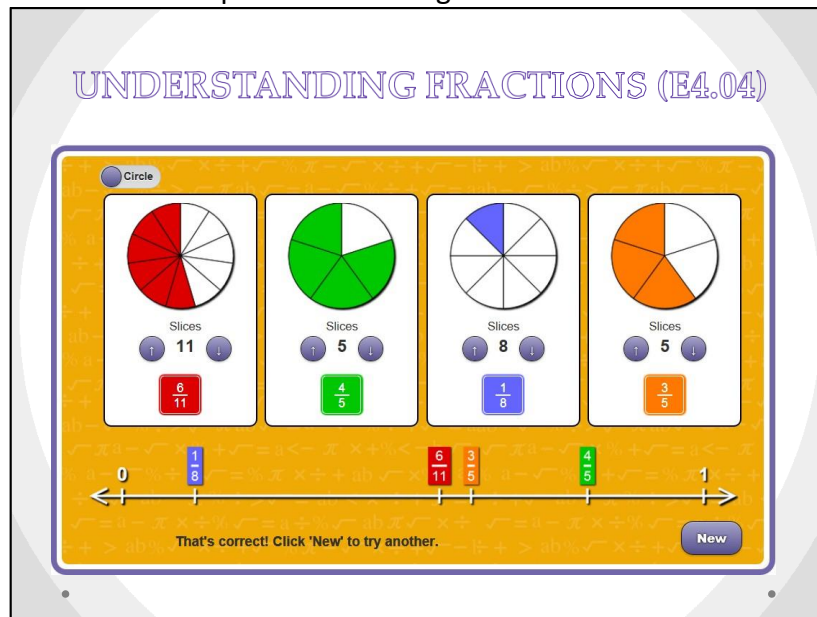
Objectives Highlighting
Conceptual Understanding and Algorithmic Learning



- Level 3
- At time 3:40 the video instruction visually explains the numerator and denominator. The Denominator always counts the entire part of the area model. The Numerator the shaded part.

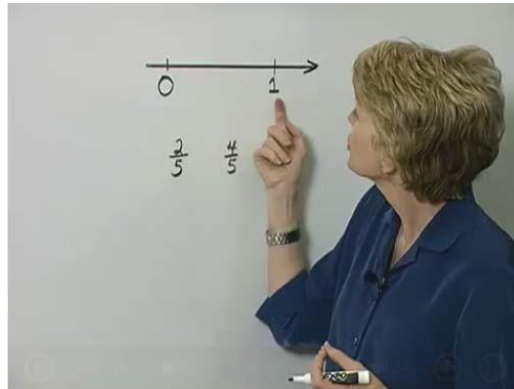


- Level 3
- Starting at 4:15 circles are used to show the concept behind a fraction by counting the parts and shading them.



- Level 3
- The explore item reiterates the concept by allowing the students change the numerator and denominator

COMPARING FRACTIONS (2063)

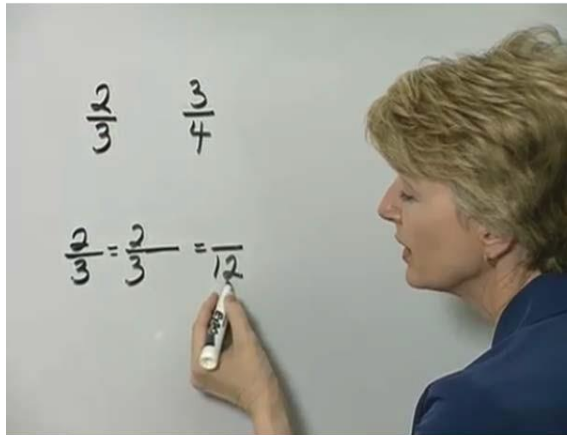


We've got two-fifths and four-fifths. To graph these fractions, notice I'm showing only the distance

- Level 6

- The video uses number line 2:16 (conceptual and visual) to compare fractions ASWELL AS finding equivalent fractions (algorithmic) 3:30.

COMPARING FRACTIONS (2063)

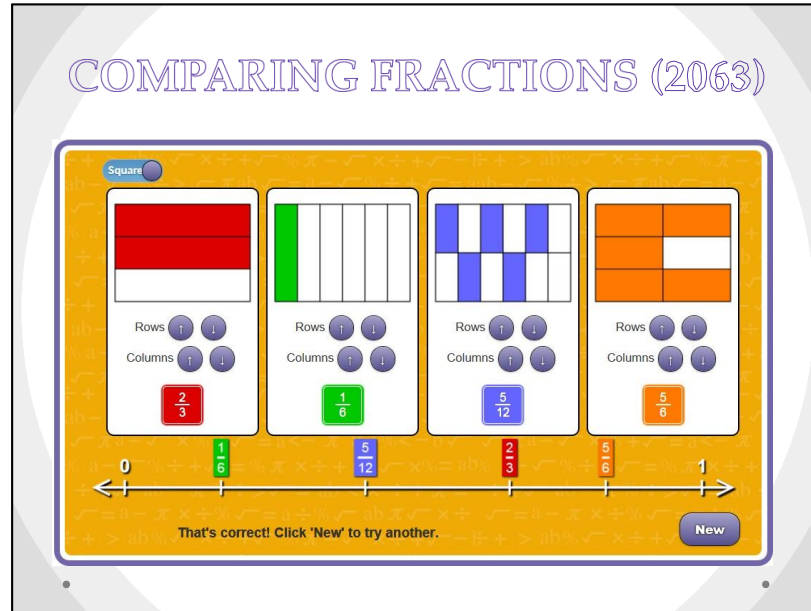


So, let's ask ourselves three times what number gives me twelve? Well, three times four is twelve.

- Level 6

- The video uses number line 2:16 (conceptual and visual) to compare fractions ASWELL AS finding equivalent fractions (algorithmic) 3:30.

• .



- Level 6
- The explore item reiterates the concept by allowing the students change the numerator and denominator


ADDING AND SUBTRACTING FRACTIONS WITH UNLIKE DENOMINATORS (2082)

Now, what did we just accomplish? We're now adding fractions with the same denominator.

- Level 6
- The videos' algorithmic coverage is complemented by the conceptual explore item (on next page). Exploration incorporates visual fraction models to show the concept of numerator/denominator. Visual understanding of Least Common Denominator.


ADDING AND SUBTRACTING FRACTIONS WITH UNLIKE DENOMINATORS (2082)

Drag the colored regions into the sum circle and name the sum.



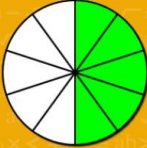
$$\frac{2}{5}$$

+




$$\frac{1}{10}$$

+



$$\frac{4}{10}$$

+




$$\frac{1}{10}$$

$$\frac{4}{10}$$

+

$$\frac{1}{10}$$

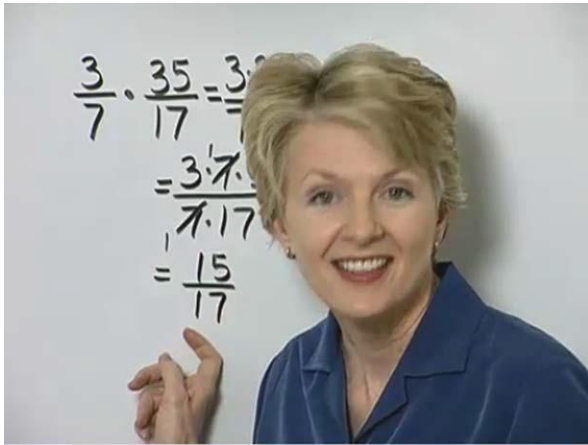
=



Check

- Level 6
- The videos' algorithmic coverage is complemented by the conceptual explore item. Exploration incorporates visual fraction models to show the concept of numerator/denominator. Visual understanding of LCD.

MULTIPLYING FRACTIONS BY FRACTIONS (2071)



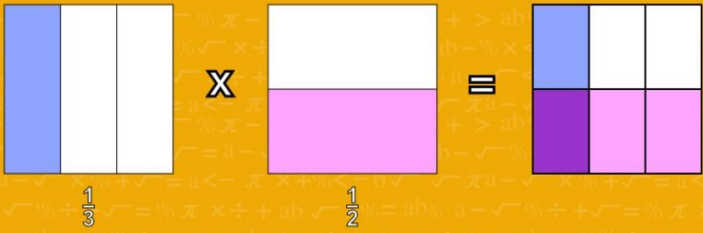
In the denominator, one times seventeen, or seventeen in the denominator.

- Level 6
- The videos' algorithmic coverage is complemented by the conceptual explore item (on next page). This shows the meaning behind multiplication of fractions not just by "numerator by numerator" and "denominator by denominator", but actually shows the area models and what taking a fraction of a fraction means.

MULTIPLYING FRACTIONS BY FRACTIONS (2071)

What is the product of $\frac{1}{3}$ and $\frac{1}{2}$?

$\frac{8}{21}$ $\frac{1}{6}$ $\frac{7}{9}$ $\frac{8}{9}$



$\frac{1}{3} \times \frac{1}{2} = \frac{1}{6}$

Very Good! $\frac{1}{3}$ times $\frac{1}{2}$ is $\frac{1}{6}$.
Click 'Next' to try another one.

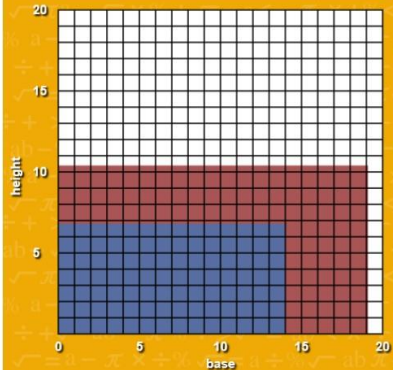
Next

- Level 6

- The videos' algorithmic coverage is complemented by the conceptual explore item. Shows the meaning behind multiplication of fractions not just by "numerator by numerator" and "denominator by denominator", but actually shows the area models and what taking a fraction of a fraction means.

MODELING PERIMETER AND AREA USING WHOLE NUMBERS AND FRACTIONS (2091)

To find the Area and Perimeter drag the sides of the figure, or type in the height and the base.

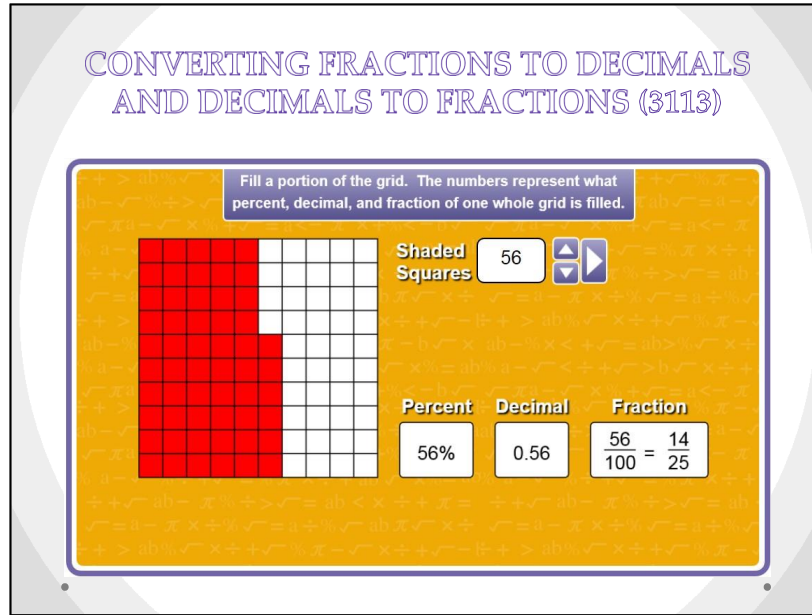


Active Figure		Frozen Figure	
Height =	10.4	Height =	6.8
Base =	19.1	Base =	14
Area ≈	198.6	Area ≈	95.2
Perimeter =	59	Perimeter =	41.6

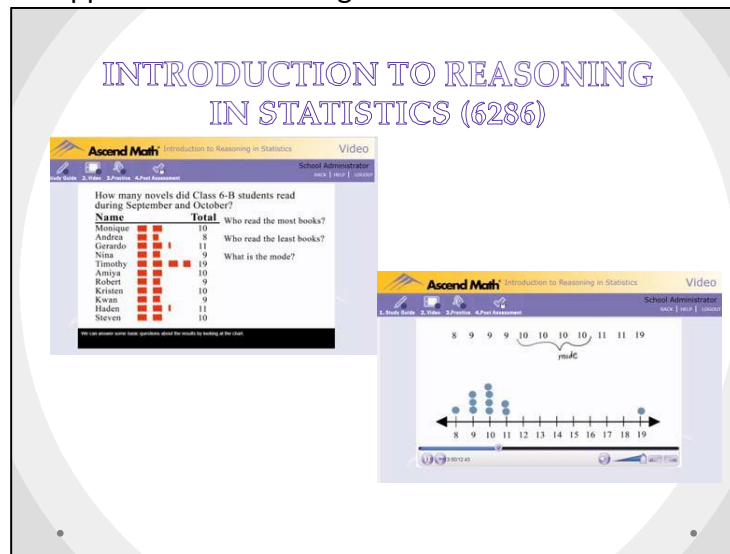
Un-Freeze

- Level 7

- The explore item above incorporates the area and perimeter to practice using and understanding decimals visually.

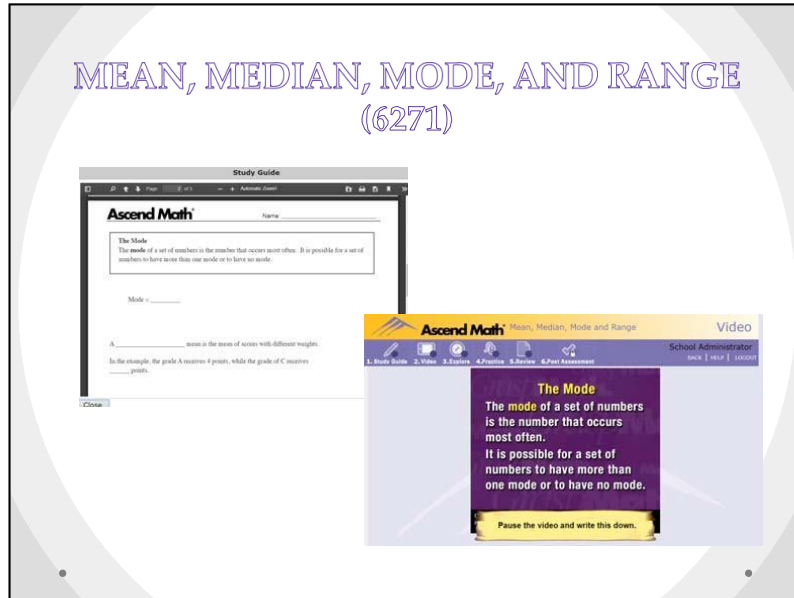


- Level 7
- The explore item synergizes with the video by allowing students to manipulate a hands on approach to visualizing decimals and fractions.

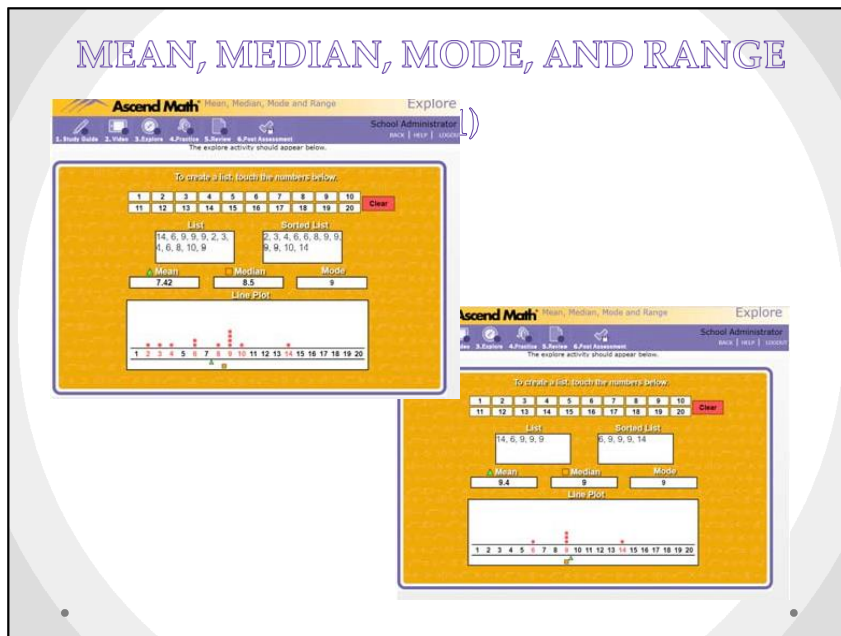


Ascend begins by visually introducing students to the concept of range (least to most) and mode using different representations.

MEAN, MEDIAN, MODE, AND RANGE (6271)



Ascend builds on the visual for formalize the concepts of median and mode.



Ascend allows the student to then visualize data through an exploration.