

6<sup>th</sup> grade

1779



The equation shown has an unknown number.

$$\square \div \frac{2}{3} = \frac{3}{4}$$

Enter a fraction that makes the equation true.

A digital calculator interface with a grid of buttons. The top row contains navigation buttons: left arrow, right arrow, undo, redo, and a trash icon. The second row contains buttons for digits 1, 2, 3 and operators +, -, \*, /. The third row contains buttons for digits 4, 5, 6 and comparison operators <, =, >. The fourth row contains buttons for digits 7, 8, 9 and mathematical symbols for fraction, square root, parentheses, and absolute value. The bottom row contains buttons for 0, decimal point, and negative sign.

DOK - 1

Claim- 1

11<sup>th</sup> grade

1997



Suppose  $\angle A$  is an angle such that  $\cos A < \sin A$ .  
Select **all** angle measures that are possible values  
for  $\angle A$ .

- 25°
- 35°
- 45°
- 55°
- 65°
- 75°

DOK - 2  
Claim- 2

4<sup>th</sup> grade

1971



A student claims that all fractions greater than  $\frac{3}{7}$  have a denominator less than 7.

Show that the student's claim is only sometimes true.

- A. Drag one number into each box to create a fraction greater than  $\frac{3}{7}$  with a denominator less than 7.
- B. Drag one number into each box to create a fraction greater than  $\frac{3}{7}$  with a denominator greater than 7.

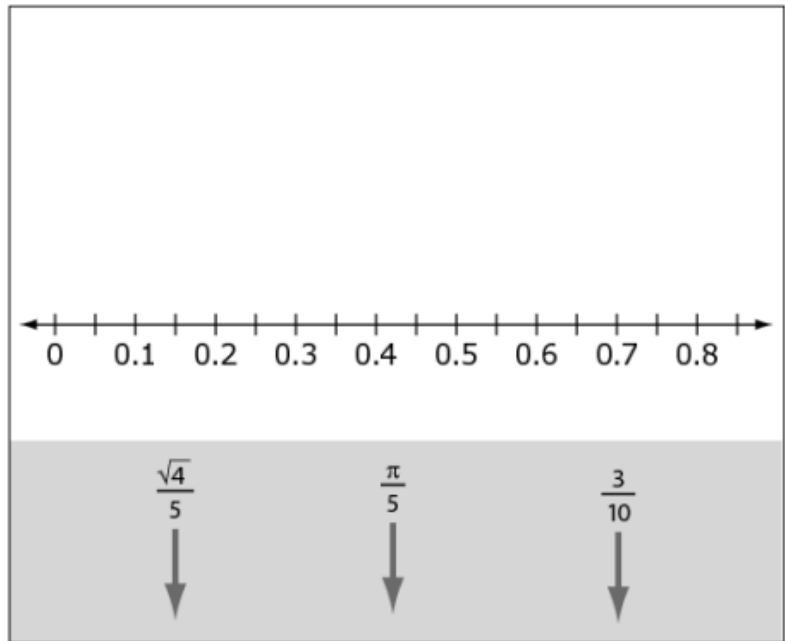
0	
1	<b>A. Denominator less than 7</b>
2	
3	<input type="text"/>
4	<input type="text"/>
5	
6	
7	<b>B. Denominator greater than 7</b>
8	
9	<input type="text"/>
	<input type="text"/>

DOK - 2  
Claim - 3

**1860**



Drag each number to its correct position on the number line.



DOK - 2  
Claim - 1

7<sup>th</sup> Grade

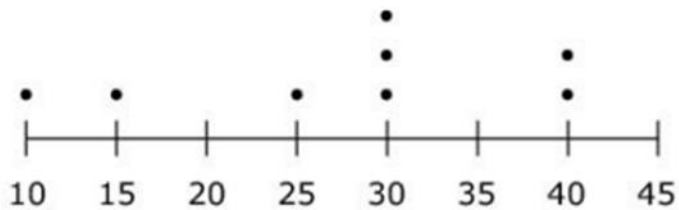
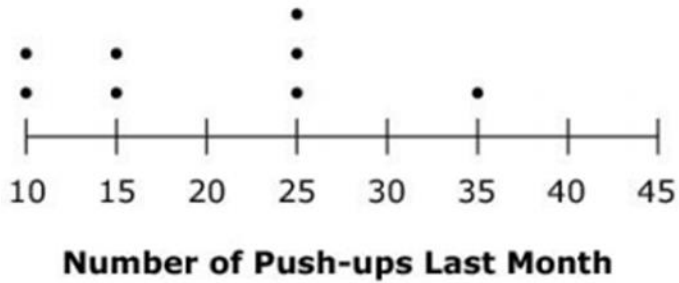
What is the increase in the mean number of push-ups from last month to this month?

**1880**



Mr. Anthony wants to know how some student athletes are improving in the number of push-ups they can do.

These dot plots show the number of push-ups each student was able to do last month and this month.



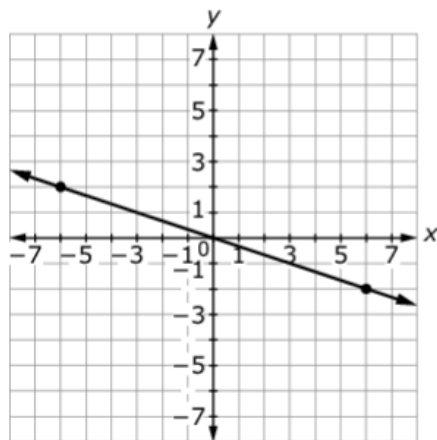
DOK - 2  
Claim -1

8<sup>th</sup> grade

1863



Consider this graph of a line.



Enter an equation for the line.

←	→	↶	↷	✖				
1	2	3	x	y				
4	5	6	+	-	*	÷		
7	8	9	<	≤	=	≥	>	
0	.	-	$\frac{\square}{\square}$	$\square^\square$	( )	$\sqrt{\square}$	$\sqrt[\square]{\square}$	$\pi$

DOK - 1  
Claim -1

4<sup>th</sup> grade

**1800**



Select **all** the numbers that make this inequality true.

$$2\frac{1}{8} > \square + 1 + \frac{1}{8}$$

$\frac{1}{8}$

$\frac{4}{8}$

$\frac{10}{8}$

$\frac{16}{8}$

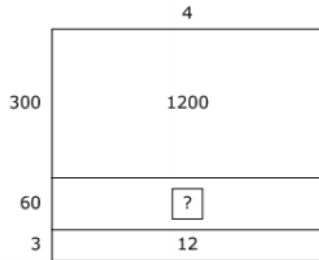
**DOK - 3**  
**Claim-3**

5<sup>th</sup> grade

1890



Jasmine solves the equation  $\square \div 4 = 363$  using this area model.



Which statement explains how Jasmine should solve for the missing number in the model?

- (A) Jasmine should divide 60 by 4.
- (B) Jasmine should divide 1200 by 12.
- (C) Jasmine should multiply 3 times 60.
- (D) Jasmine should multiply 4 times 60.

**DOK - 3**  
**Claim - 3**

6<sup>th</sup> grade

1857



Look at the equation.

$$\frac{2}{3} \times \frac{\square}{\square} = n$$

Sarah claims that for any fraction multiplied by  $\frac{2}{3}$ ,  $n$  will be less than  $\frac{2}{3}$ .

To convince Sarah that this statement is only sometimes true:

**Part A:** Drag one number into each box so the product,  $n$ , is less than  $\frac{2}{3}$ .

**Part B:** Drag one number into each box so the product,  $n$ , is **not** less than  $\frac{2}{3}$ .

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

Delete

**Part A:** Product  $n$  is less than  $\frac{2}{3}$

$$\frac{2}{3} \times \frac{\square}{\square} = n$$

**Part B:** Product  $n$  is not less than  $\frac{2}{3}$

$$\frac{2}{3} \times \frac{\square}{\square} = n$$

**Part A:** Product  $n$  is less than  $\frac{2}{3}$

**DOK - 3**  
**Claim - 3**