6th Grade Items

1. Concepts and Procedures

1779

The equation shown has an unknown number.

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

Enter a fraction that makes the equation true.

1	2	3	+	-	*	÷
4	5	6	<	=	>
7	8	9	$\frac{\square}{\square}$	$\square^{\square}$	( )	| |
0	.	-

Claim___1__

DOK__1____

2. Problem Solving

1855

Carlos needs 1.7 meters of wire for one project and 0.8 meter of wire for another project.

Part A:
Shade the model to represent the total amount of wire Carlos needs. Each full row represents 1.0 meter.

Part B:
Carlos has 2.4 meters of wire.

Does Carlos have enough wire?
- If he does, answer how much wire he will have left over.
- If he does **not**, answer how much more he needs.

Drag the value into one of the boxes.

0.1
0.2
0.3
0.4
0.5
0.9
1.6
2.5
3.2
4.1

Delete

Part A

Each full row = 1.0 meter

Part B

He will have [ ] meters of wire left over.

OR

He needs [ ] more meters of wire.
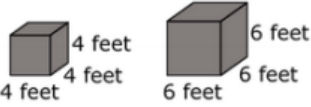
Claim__2___

DOK___2___
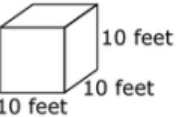
3. Communicates Reasoning

1958

Two shaded cubes are shown.

4 feet
4 feet
4 feet

6 feet
6 feet
6 feet

Ben states that the combined volume of these two shaded cubes is equal to the volume of this cube:

10 feet
10 feet
10 feet

Part A: Select whether Ben's statement is true or false.

Part B: Drag numbers into the box to show the combined volume of the shaded cubes.

0 1 2 3 4 5 6 7 8 9

Delete

A. Ben's statement

True   False

B. Combined volume

[   ] cubic feet

Claim__ 3___

DOK___3___

7th Grade Items

4. Communicates Reasoning

1842

Determine whether each statement is true for all cases, true for some cases, or not true for any case.
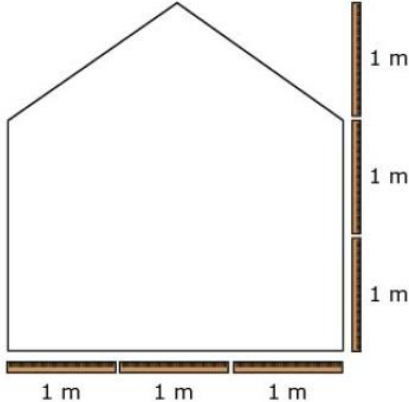
	True for all cases	True for some cases	Not true for any cases
Two vertical angles form a linear pair.	☐	☐	☐
If two angles are supplementary and congruent, then they are right angles.	☐	☐	☐
The sum of two adjacent angles is 90°.	☐	☐	☐
The measure of an exterior angle of a triangle is greater than every interior angle of the triangle.	☐	☐	☐

Claim___3__

DOK___3___

5.   Problem Solving

1882

John needs to paint one wall in his school. He knows that 1 can of paint
covers an area of 24 square feet. John uses a meter stick to measure the
dimensions of the wall as shown.

1 m

1 m

1 m

1 m   1 m   1 m

[1 meter = approximately 39 inches]

What is the **fewest** number of cans of paint John can use to paint the wall?

Claim__2___

DOK___2___

8th Grade Items

6. Concepts and Procedures

1864

Joe solved this linear system correctly.

$6x + 3y = 6$

$y = -2x + 2$

These are the last two steps of his work.

$6x - 6x + 6 = 6$

$6 = 6$

Which statement about this linear system must be true?

Ⓐ x must equal 6

Ⓑ y must equal 6

Ⓒ   There is no solution to this system.

Ⓓ   There are infinitely many solutions to this system.

Claim___1__

DOK___2___

7. Concepts and Procedures

1869

Delete   Add Point   Connect Line

The school is 100 meters from Jason's house. The following describes his most recent trip:

- He walked 50 meters toward school in 2 minutes. He realized that he left a book at home.
- He turned around and walked home at the same speed.
- He spent 1 minute looking for his book.
- He walked all the way to school at twice his original speed.

Use the Connect Line tool to finish a graph that accurately represents Jason's trip.

Distance from Jason's House (meters) — 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

Time (min) — 1 2 3 4 5 6 7 8

Claim____1__

DOK__2____

8.

2042

Consider this equation.

$$c = ax - bx$$

Joseph claims that if a, b, and c are non-negative integers, then the equation has exactly one solution for x.

Select **all** cases that show Joseph's claim is **incorrect**.

☐ $a - b = 1, c = 0$

☐ $a = b, c \neq 0$

☐ $a = b, c = 0$

☐ $a - b = 1, c \neq 1$

☐ $a \neq b, c = 0$

Communicates Reasoning

Claim____3__

DOK___3___