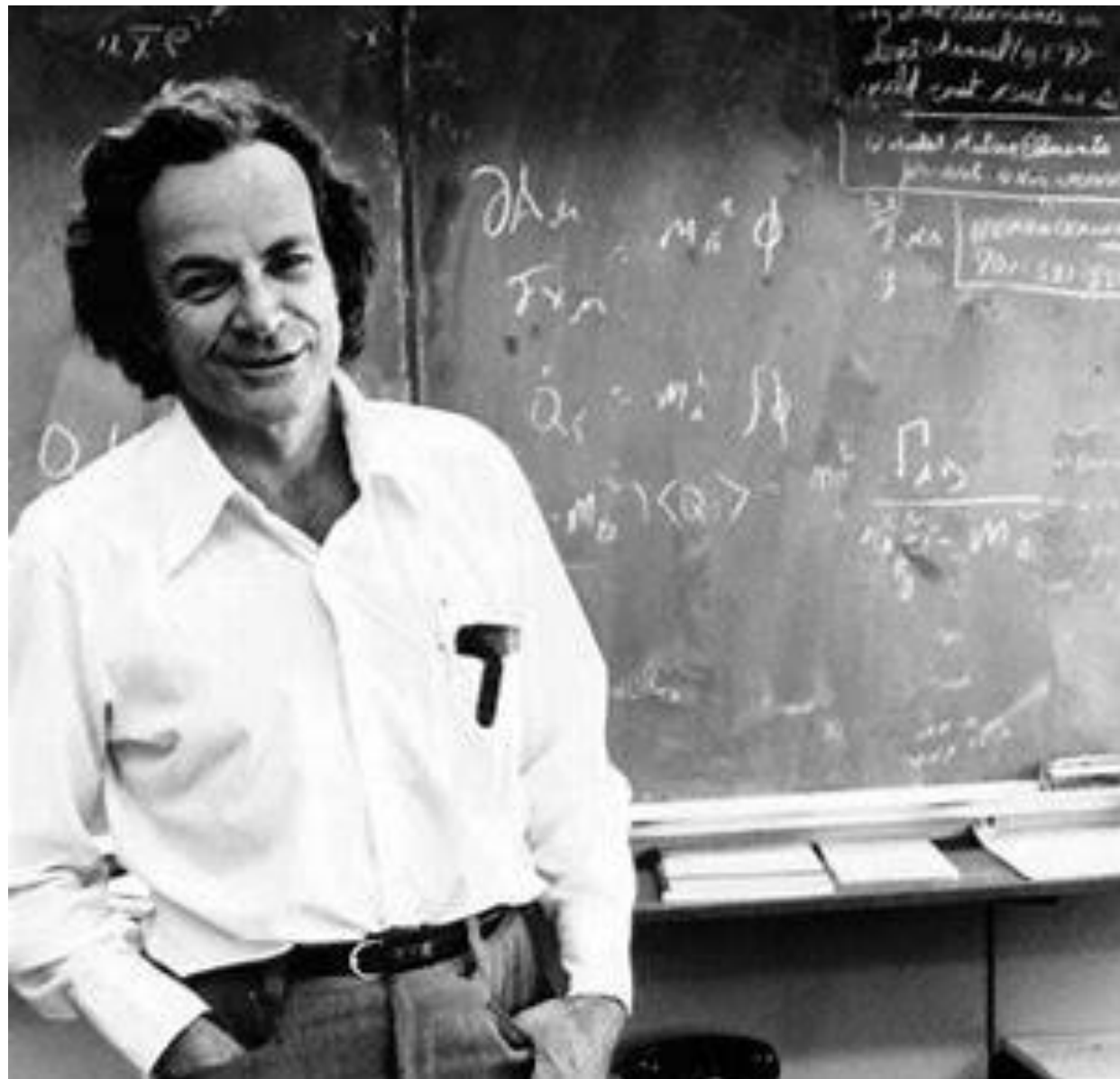


Learning from Shanghai

Cargo Cults



What is the same and what is different?



例题分析

下列分式中，哪些是最简分式；如果不是，请化简：

① $\frac{a}{a-b}$ ✓

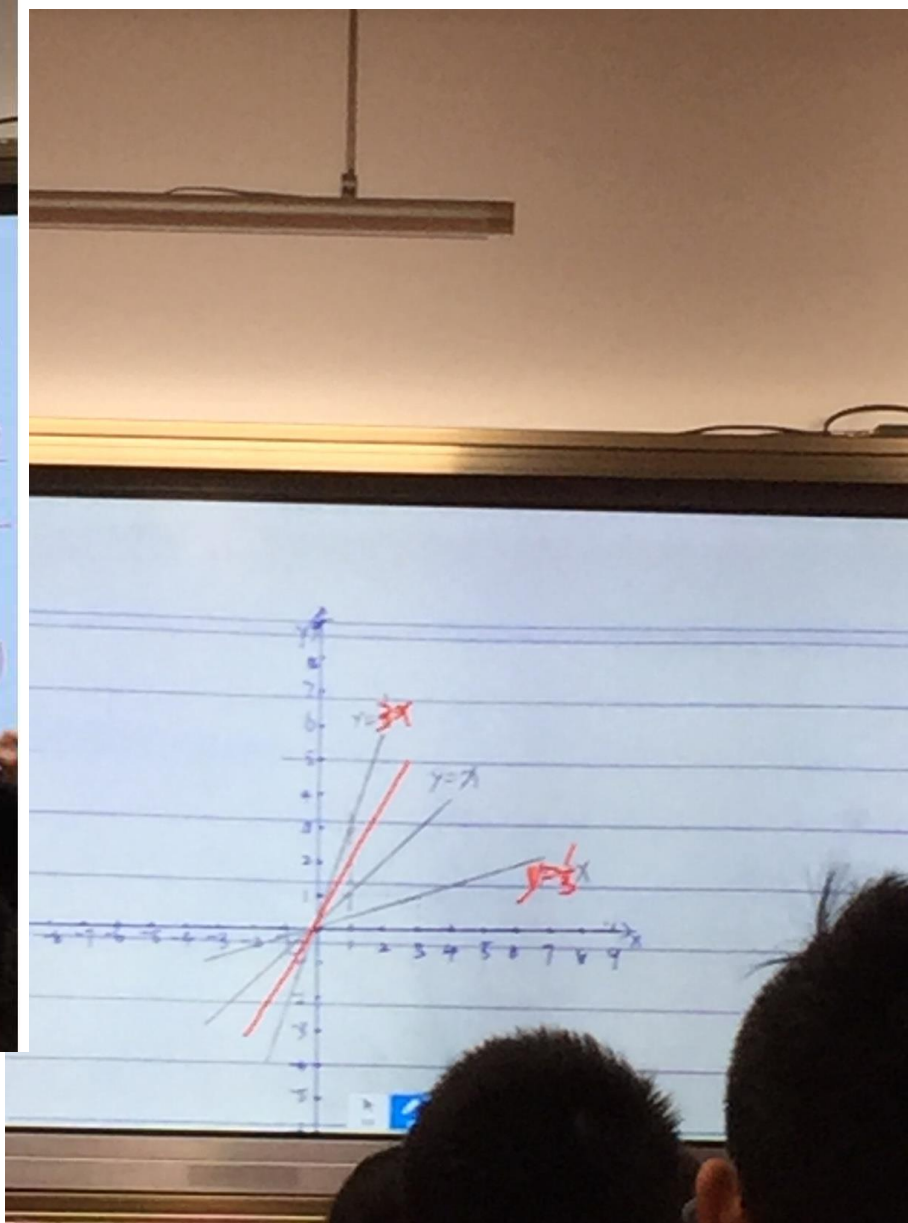
② $\frac{-2x+3x^2}{2x} \times \frac{1}{10x} = \frac{x(-2+3x)}{2x} = \frac{-2+3x}{2}$

③ $\frac{x^2-y^2}{x-y} \times \frac{(x-y)(2+y)}{3-y} = \frac{x^2-y^2}{x+y} \times \frac{(x-y)(2+y)}{3-y}$

④ $\frac{x^2+y^2}{x+y}$ ✓

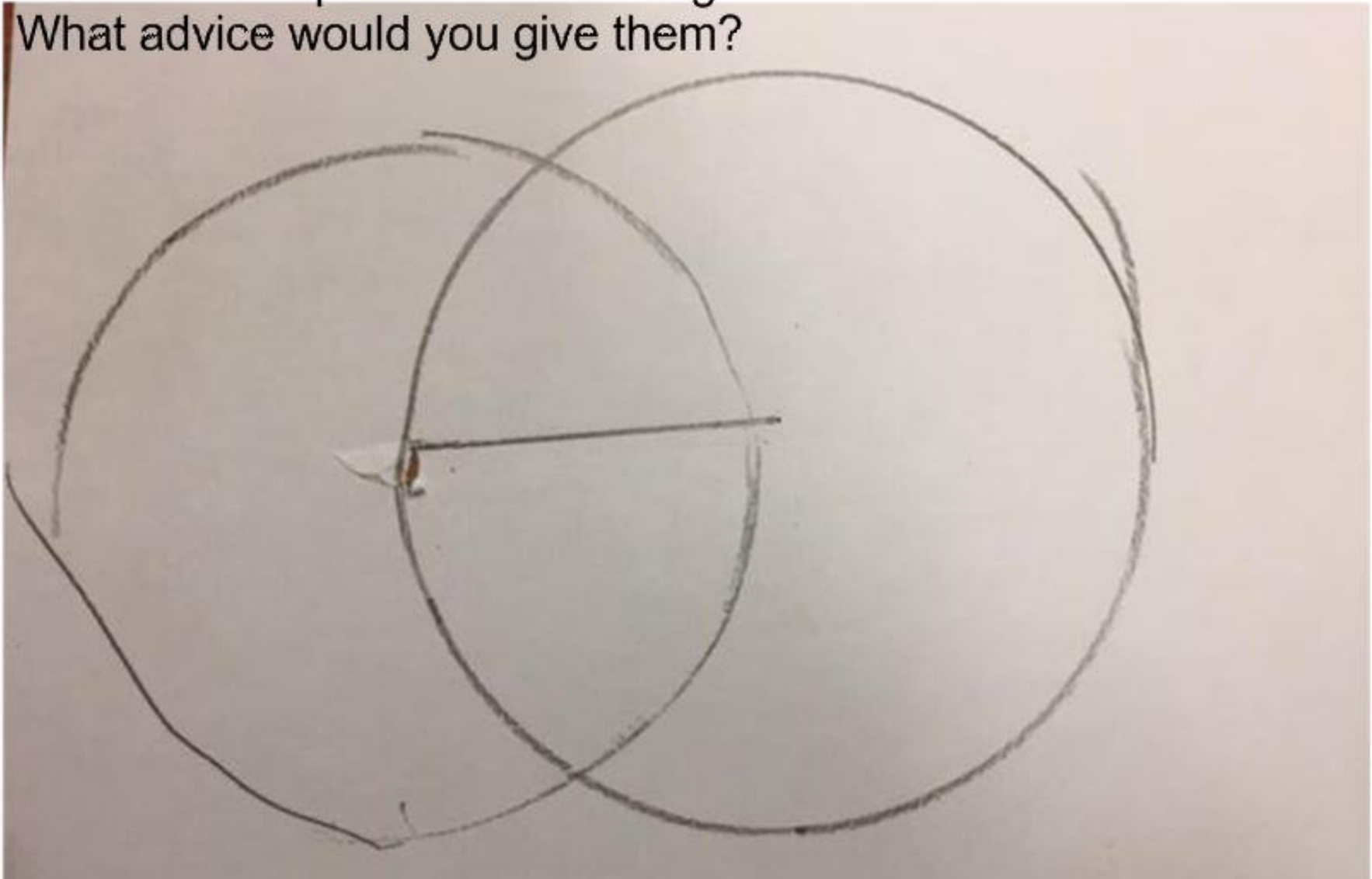
⑤ $\frac{x^2-5x-6}{x^2-5x} \times \frac{(x-6)(x+1)}{x(x-5)} = \frac{(x-6)(x+1)}{x(x-5)}$ ✓

⑥ $\frac{x^2-4x+4}{4-x^2} \times \frac{1}{10x} = \frac{(x-2)^2}{(2+x)(2-x)}$



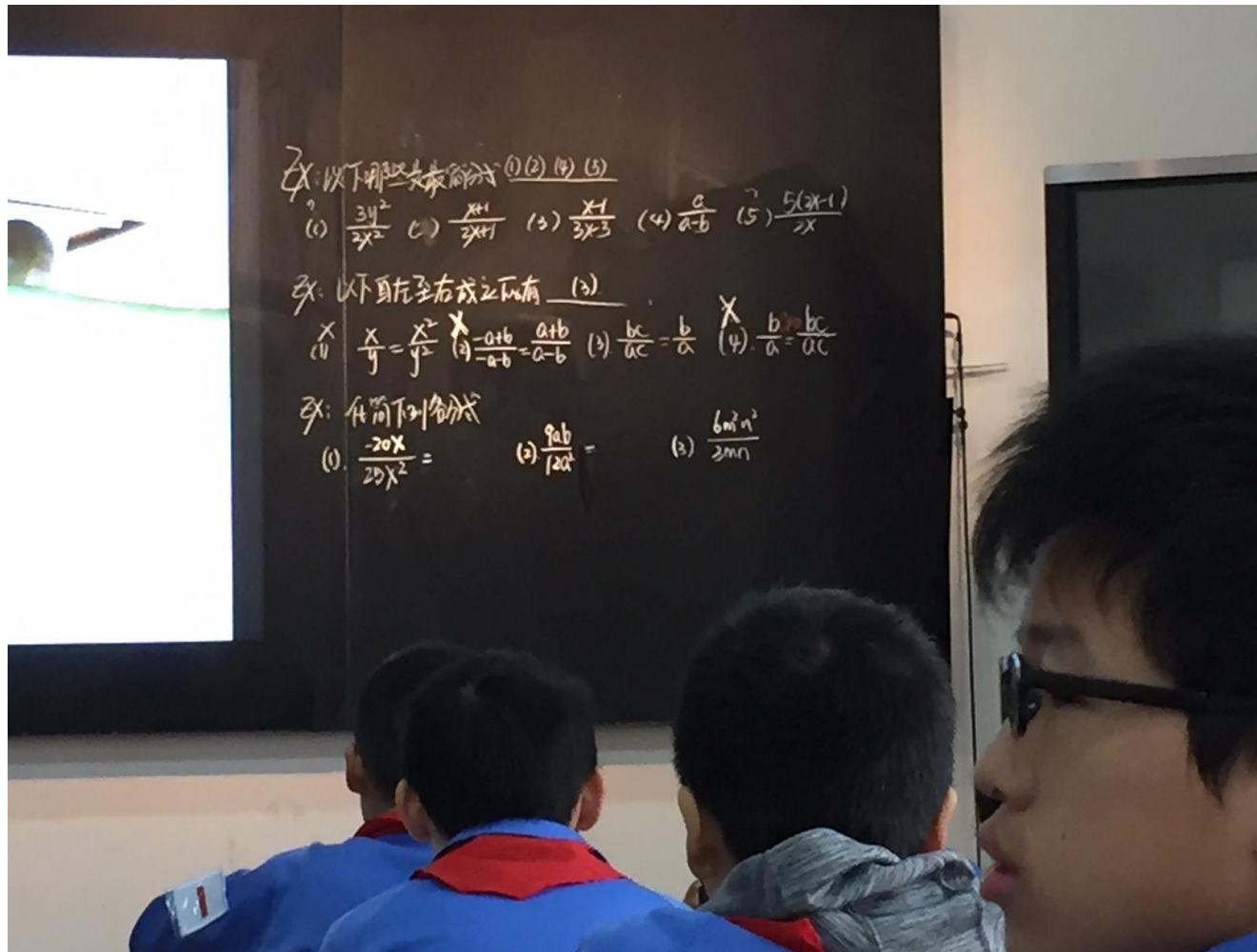
How could having a visualiser to show work done by students immediately impact on your classroom practice?

This person has tried to draw a perpendicular bisector.
What has this person done wrong?
What advice would you give them?



Short discussions early on in the lesson using conceptual variation to clarify a concept.

The top question is "Which is these expressions is in it's simplest form?"



From a lesson delivered at Impington this week.

Ex 2: True or False

- ▶ (1) A composite number has at least 3 factors. **T**
()
- ▶ (2) Every odd number is a Prime number. **F** ()
- ▶ (3) Every even number is a Composite number.
()
- ▶ (4) All positive integers, besides prime numbers, the rest are composite numbers. **F**
()

What are the advantages of having these short discussions early on in a lesson?

What problems might there be?

Missing Boxes

Put a number in these
boxes to make 5 a factor of
each number.

5

1

From a lesson at Impington earlier this week

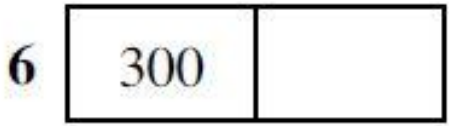
3. 填空.

$$\begin{array}{r} \square 3 \\ \times \square 2 \\ \hline 126 \\ 189 \\ \hline 2016 \end{array}$$

$$\begin{array}{r} 47 \\ \times \square \square \\ \hline 188 \\ \square 41 \\ \hline \square 598 \end{array}$$

$$\begin{array}{r} \square \square \\ \times 69 \\ \hline 225 \\ \square \square \square \\ \hline \square \square \square 5 \end{array}$$

9).



= 324

10).

9



= 356

11).

6



= 392

12).

8

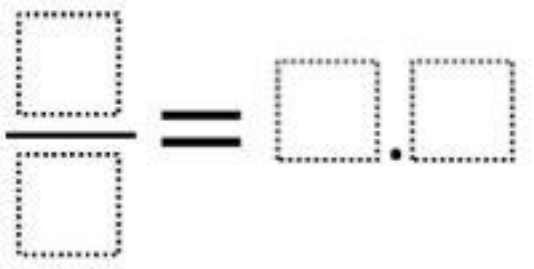


= 280

Ten ticks

FRACTION AND DECIMAL

Directions: Using the digits 0 through 9, at most one each time, create an an equivalent fraction and decimal number.



OpenMiddle.com

$$\begin{array}{r} 25 \\ \times 13 \\ \hline 75 \\ 250 \\ \hline 325 \end{array}$$

Replace one number by a box.
Can you always work out what
the missing number is?

How does your reasoning
change according to where
the box is?

(with thanks to Alex Paviana who inspired this idea)

$$\begin{array}{r} 25 \\ x 13 \\ \hline 75 \\ 250 \\ \hline 325 \end{array}$$

Replace two numbers by boxes.
Can you always work out what
the missing numbers are?

How does your reasoning
change according to where
the boxes are?

(with thanks to Alex Paviana who inspired this idea)