Scenario One

A group of students are investigating the books they have in their homes.
Steve notices that $\frac{1}{2}$ of the books in his house are fiction books, while Andrew finds that $\frac{1}{5}$ of the books his family owns are fiction.

Steve states that his family has more fiction books than Andrew's.

Is Steve necessarily correct?
Why / Why not?
What action, if any, do you take?

Scenario Two

You observe the following equation in Emma's work:

$$\frac{1}{2} + \frac{2}{3} = \frac{3}{5}$$

Is Emma correct?

You question Emma about her understanding and she explains: "I ate 1 of the 2 sandwiches in my lunchbox, Kate ate 2 of the 3 sandwiches in her lunchbox, so together we ate 3 of the 5 sandwiches we had."

What, if any, is the key understanding Emma needs to develop in order to solve this problem?

Scenario Three

Two students are measuring the height of the plants their class is growing.
Plant A is 6 counters high.
Plant B is 9 counters high.
When they measure the plants using paper clips they find that Plant A is 4 paper clips high.
What is the height of Plant B in paper clips ?

Scott thinks Plant B is 7 paper clips high.
Wendy thinks Plant B is 6 paper clips high.

Who is correct?
What is the possible reasoning behind each of their answers?

Scenario Four

Anna says $\frac{7}{3}$ is not possible as a fraction.

Is $\frac{7}{3}$ possible as a fraction?
What action, if any, do you take?

Scenario Five

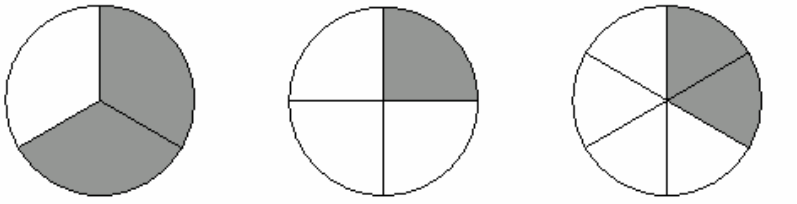
You observe the following equation in Bill's work:

$$2\frac{1}{2} \div \frac{1}{2} = 1\frac{1}{4}$$

Is Bill correct?
What is the possible reasoning behind his answer?
What, if any, is the key understanding he needs to develop in order to solve this problem?

Scenario Six

Which shape has $\frac{1}{3}$ of its area shaded?



Sarah insists that none of the shapes have $\frac{1}{3}$ of their area shaded.

Do any of the shapes have $\frac{1}{3}$ of their area shaded?
What action, if any, do you take?

Scenario Seven

You observe the following equation in Bruce's work: $\frac{1}{6} > \frac{1}{4}$

Is he correct?
After checking that Bruce understands what the ">" symbol means, what action, if any, do you take?