

CHANGING WHOLESS: PATTERN BLOCK CHALLENGE

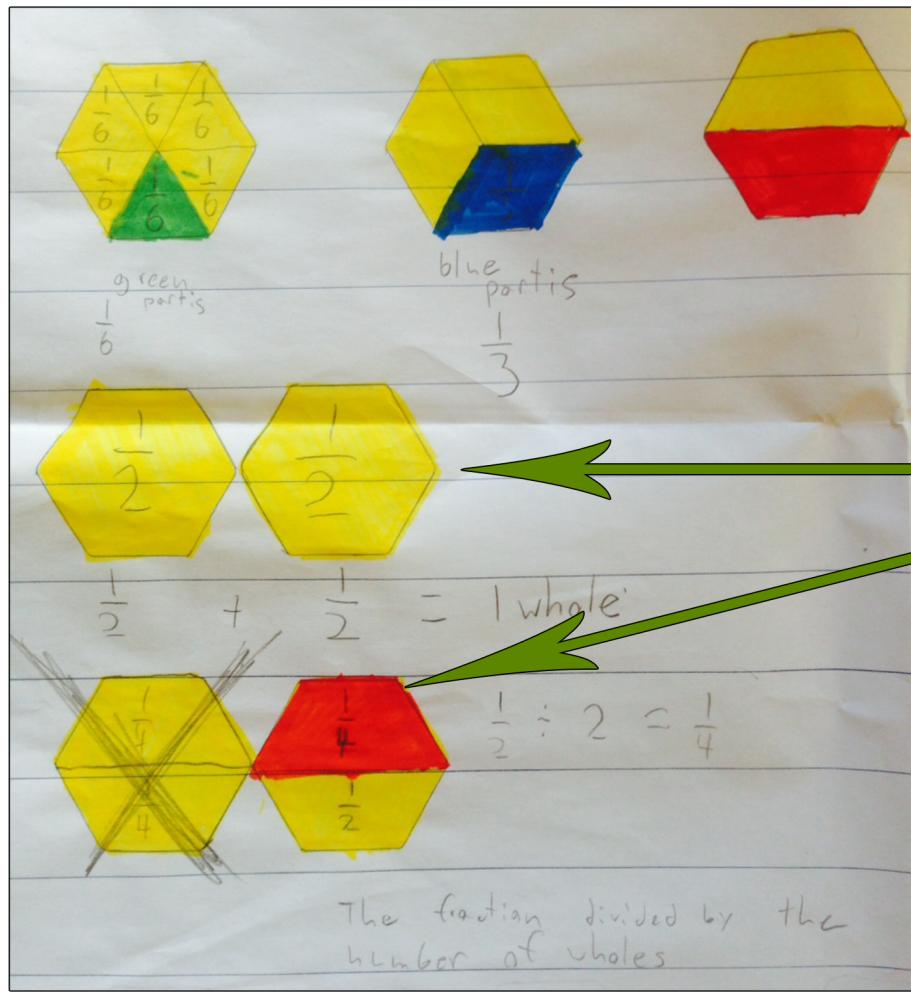
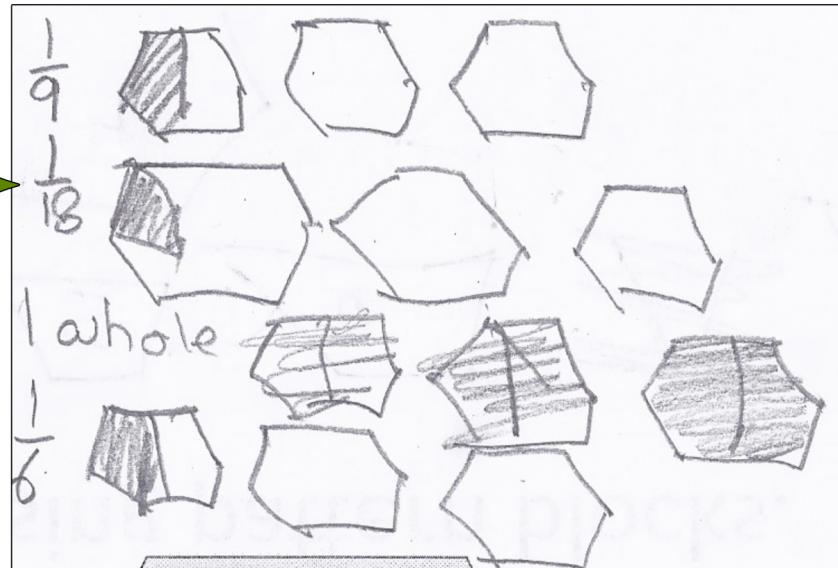
UNIT F Compose and decompose fractions flexibility with models and symbols

SAMPLE 2

Some students will struggle to produce fractions when the whole is not defined as one hexagon.

Consider the question: **If a hexagon is worth 3, what is one green triangle worth?**

A common misinterpretation that we see in this case involves →
students who construct the question as 3 hexagons being one whole (instead of 1 hexagon being 3 wholes). For example, a student might say in this case that one green triangle is $\frac{1}{18}$, when actually one green triangle is $\frac{1}{2}$.



The greater the “value” of one hexagon, the more each shape is worth. The less the value of the hexagon, the less each shape is worth (for example, if the hexagon is worth one half, then a green triangle is worth $\frac{1}{12}$).

Proportional reasoning is at the heart of this activity.

Students may find the task easier when the hexagon is worth $\frac{1}{2}$ compared to when it is worth 3.

Students may find it helpful to think in terms of money. For example, if the hexagon is worth \$3, how much is the trapezoid worth?