

Learning Progressions in Practice

ETS learning progressions are a tool for building a valuable understanding of what students need to learn and the typical paths they are likely to take to get there. But what do learning progressions look like in practice? Let's look at four students in a middle school math class, each with a different level of understanding along one learning progression: proportions and ratios. In this example, we examine how each student might answer a single question, given their level of understanding.

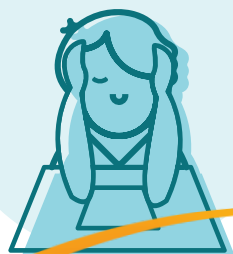
QUESTION FOR THE CLASS:

Which is the Bigger Ratio: **4:5** or **3:6**?

JIMMY, EVIDENCE OF LEVEL ONE

INTUITIVE UNDERSTANDING

4:5 is bigger since $4 > 3$.



Jimmy can use greater/less than to make qualitative judgments, but can't quantify his judgment.

SARAH, EVIDENCE OF LEVEL TWO

ATTEMPT TO QUANTIFY

3:6 is bigger since $6-3$ is 3 but $5-4$ is only 1.



Sarah can work with simple ratios, but is unable to compare ratios where no quantities are the same.

MARCO, EVIDENCE OF LEVEL THREE

RECOGNIZING MULTIPLICATIVE RELATIONSHIPS

4:5 = 8:10 and 8:10 = 24:30.
3:6 = 15:30.
Since $24 > 15$, 4:5 is bigger.

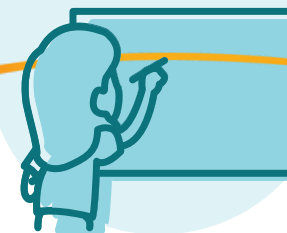


Marco can use multiplicative reasoning correctly, but may not use it efficiently.

DOMINIQUE, EVIDENCE OF LEVEL FOUR

ACCOMMODATING COVARIANCE AND INVARIANCE

4:5 = 8:10. 3:6 = 5:10.
I can check this by converting both ratios to a decimal.



Dominique has a robust understanding of ratios and uses multiple strategies.

This learning progression is simplified, but the illustration provides a basic understanding of how it and other learning progressions work. **To learn more about learning progressions, visit [Winsight.org](https://www.winsight.org).**