

Dr. Taylor's Pedagogical Notes

SUBTRACTING WHOLE NUMBERS

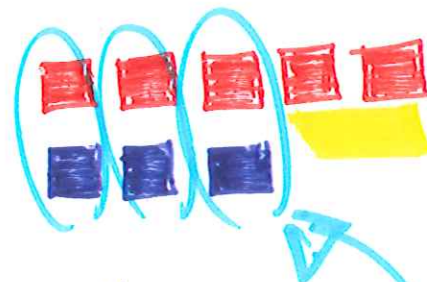
How many more is $5 - 3$

WE SHALL LOOK AT MULTIPLE STRATEGIES RANGING FROM CONCRETE TO ABSTRACT.

① COLORED SQUARES

$$5 = 1 + 1 + 1 + 1 + 1$$

$$3 = 1 + 1 + 1$$



→ HERE IS WHY I ASKED "HOW MANY MORE?"

BECAUSE THE NOTION OF $1 - 1 = 0$ OR NEGATIVES CANCEL POSITIVES MIGHT NOT BE THERE CONCEPTUALLY...

BUT WITH "HOW MANY MORE" THE "CANCELLATION" MAKES LOGICAL SENSE.

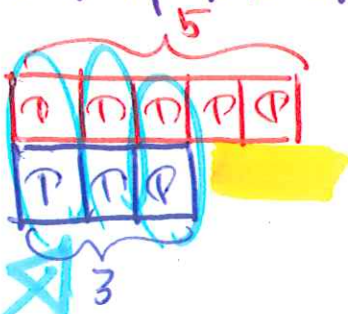
WE SHALL "GROUP" THE "OPPOSITE" COLORS AND THE COUNT WHAT REMAINS.

CONCRETE

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5-3 CONTINUED ...

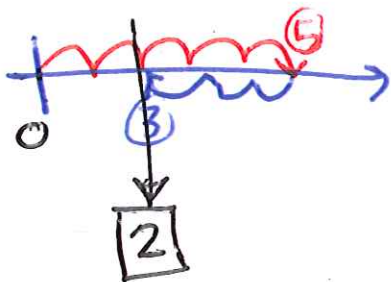
② STRIP DIAGRAM



Graphical

→ AGAIN WE ARE ABLE TO CLEARLY SEE HOW MORE ON TOP THAN ON BOTTOM WILL RESULT IN "SOME" LEFT OVER ON TOP AFTER WE "GROUP" TOP AND BOTTOMS AS THEY CORRESPOND TO ONE ANOTHER

Symbolic



③ HERE WE SEE OUR JOURNEY "CHANGES" DIRECTION. THIS BEGINS AN UNDERSTANDING OF "NEGATIVE" BY DIRECTION.

FINAL ANSWER: $\boxed{2}$