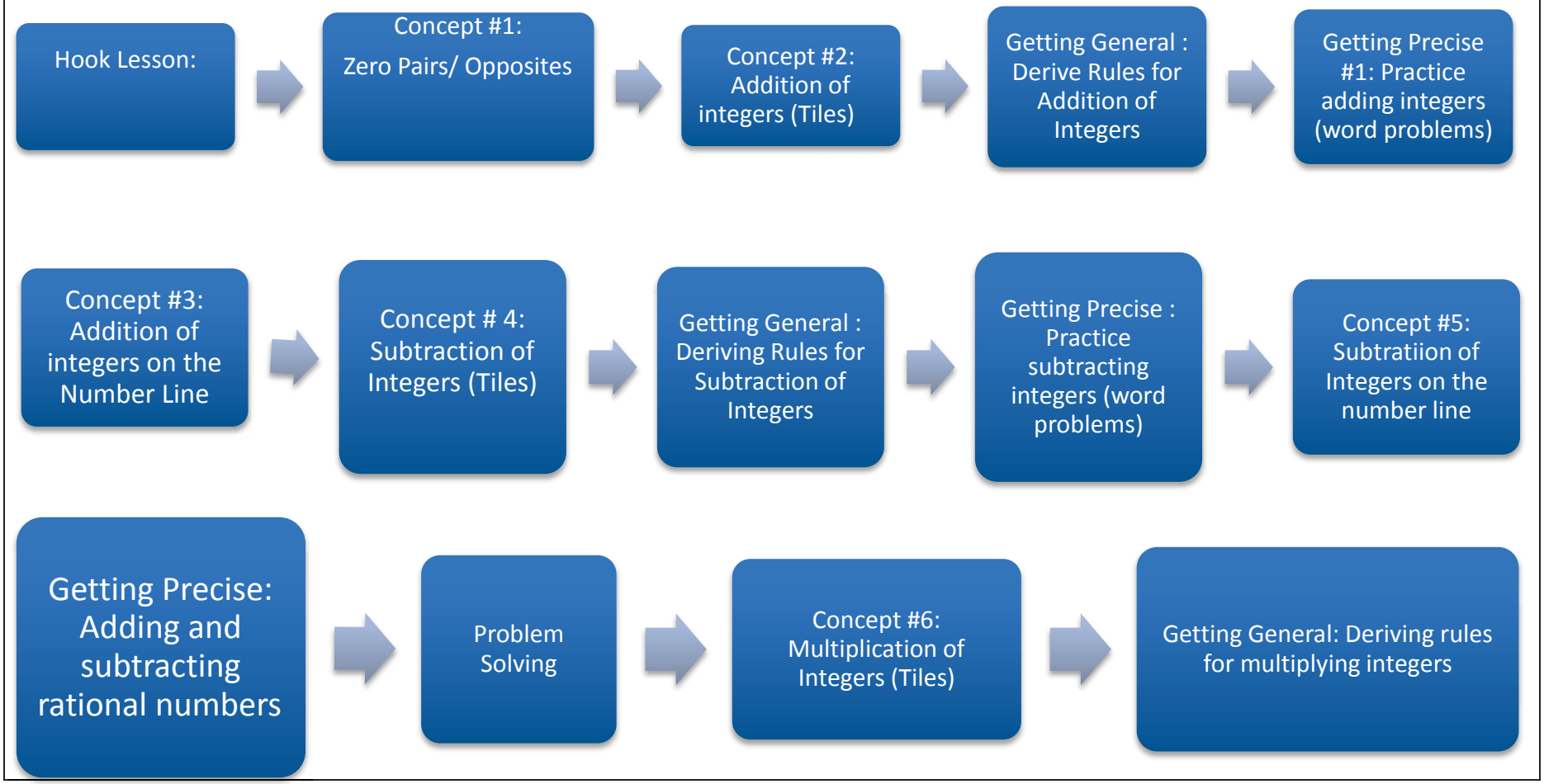
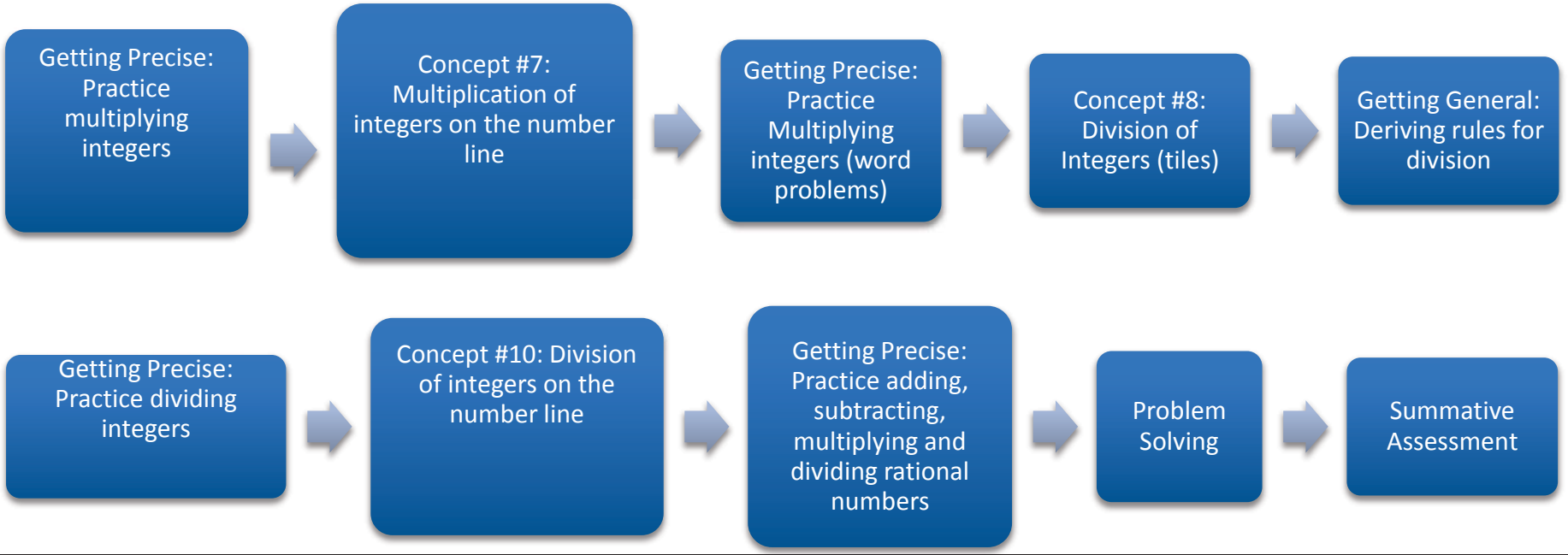
Common Core Math Unit Plan

Unit Name:	Integers & Operations with Rational Numbers	**Course:** CC Math 1	**Time Frame:** 5 weeks
Sub-Topics	Integer operations; Integers on a Number Line; Add, subtract, multiply and divide rational numbers in context.		
Big Idea	Rational numbers as well as their sums, differences, products and quotients, can be represented by unique points on a number line.		

Story Board/ Unit Flow





Rationale: In grade seven, students represent addition and subtraction on a horizontal or vertical number line diagram **(7.NS.1 a-c▲)** with rational numbers, which include negative numbers. Students add and subtract understanding $p + q$ as the number located a distance $|q|$ (the absolute value of q) from p on a number line, in the positive or negative direction, depending on whether q is positive or negative. They demonstrate that a number and its opposite have a sum of 0 (are additive inverses), and they understand subtraction of rational numbers as adding the additive inverse. Teachers are encouraged to teach operations with signed rational numbers using a conceptual model such as a number line model or area model. The focus is on both the interpretation of signed numbers as indicating direction (with respect to their placement on a number line with respect to 0) and on real world interpretations of signed numbers as positive or negative changes (gains or deficits) with respect to a 0 (e.g. 0 balance with respect to money, 0 degrees Celsius being when water freezes). Students discover and understand why the rules of multiplication and division of integers work.