Patterns and Relations

Activity 6 Assessment

Modelling and Solving Linear Equations

Content: Solving Simple Two-Step Equations of the Form $ax + b = c$			
Solves one-step equations using number sense only "If $x + 3$ is 9, x must be 6."	Solves two-step equations using models only $5 + 2x = 11$ "I used algebra tiles to represent the equation. There are 5 unit tiles with the x tiles, so I removed 5 unit tiles from both sides. There are 2 x tiles, so I split the tiles on the right side into two equal groups to get the value of one x."	Solves two-step equations algebraically and checks their solutions "I solved the equation by first subtracting 5 from each side, then dividing both sides by 2. I substituted the answer back into the equation to see if it balanced."	Chooses the solution method they think best fits a given equation; makes connections between solution using the model and algebraic solution "Subtracting 5 from both sides is the same as removing 5 blocks from both pans of the pan balance. Dividing both sides by 2 is the same as dividing the contents of each pan into two equal groups and taking one of those groups."
Observations/Documentation			

Patterns and Relations

Activity 6 Assessment

Modelling and Solving Linear Equations

Competency: Connecting			
Connects a one-step equation to a missing value problem (e.g., a missing addend or subtrahend problem) "I can think of $x + 5 = 8$ as what number plus 5 is the same as 8."	Connects similar types of models, such as a pan balance and algebra tiles "When I take away 5 unit tiles from both sides, it's like when I remove 5 blocks from both pans of the pan balance."	Connects models to the algebraic method of solving "When I take away 5 unit tiles from both sides, it is the same as subtracting 5 from both sides of the equation."	Connects algebraic solution methods for equations involving lesser whole numbers to solution paths for equations involving greater numbers or other numbers that cannot be easily modelled "Just like I can subtract 5 from both sides to isolate the variable term, I can subtract 5.7 or $\frac{5}{7}$, or 57 from both sides."
Observations/Documentation			