Patterns and Relations

Activity 8 Assessment

Solving Problems Using Linear Equations

Solving Problems Using Linear Equations			
Matches a given equation with a scenario it describes	Solves problems related to situations that can be modelled by given linear equations	Writes a linear equation to represent a given situation and uses it to solve a problem	Writes linear expressions or equations to model and compare two given situations to solve problems
Roula earns $12 an hour plus $30 a shift in tips. I circled the equation that can be used to determine how many hours Roula worked if she earned $114. $114 = 12 + 30h$ $114 = 12h + 30$ $114 + 30 = 12h$	$114 = 12h + 30$ Subtract 30 from each side. $114 - 30 = 12h + 30 - 30$ $84 = 12h$ Divide both sides by 12. $\frac{84}{12} = \frac{12h}{12}$ $7 = h$ Roula worked 7 h.	Suppose you know that a student spent $30 at a fall fair. The entrance fee was $12 and each ride cost $3. How many rides did they go on? I can let x be the number of rides they went on, write an equation, and solve it. $30 = 12 + 3x$ Subtract 12 from each side. $30 - 12 = 12 + 3x - 12$ $18 = 3x$ Divide both sides by 3. $\frac{18}{3} = \frac{3x}{3}$ $6 = x$ The student went on 6 rides.	The student could instead go to a different fall fair and pay $8 entrance and $4 per ride. If they go on the same number of rides, is this a cheaper option? An expression to describe the cost of this option is $8 + 4x$, where x is the number of rides. When $x = 6$, $8 + (4)(6)$ $= 8 + 24$ $= 32$ $32 > 30$, so this is a more expensive option.
Observations/Documentation			