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| **Solving Problems Using Equations and Inequalities** |
| Identifies an equation or inequality that represents a scenario“Raoul can spend up to $40 at the fair. They use $15 for food. Each ride costs $3. Which inequality shows many rides, *r*, Raoul can go on?• 15 + 3*r* ≥ 40• 40 – 3*r* ≤ 15• 3*r* + 15 ≤ 40The correct inequality is 3*r* + 15 ≤ 40. For the first inequality, Raoul would be spending more than $40; for the second, they would have less than $15 for food.” | Solves a given equation or inequality to answer an applied problem“3*r* + 15 ≤ 40I’ll solve the related equation using a flow chart.Raoul can’t go on part of a ride. I’ll round down to 8.Check: If Raoul goes on 8 rides, they spend 3(8) + 15 = 24 + 15 = 39$39 < $40. If Raoul goes on even 1 more ride, the cost will be greater than 40. So, my answer is correct.” | Writes and solves an equation to answer an applied problem*A swim team spends of their* *savings and $250 they raise in a bake sale to buy team swimsuits for $367.50. What were their savings before this purchase?*“I let *s* represent their savings. I know + 250 = 367.50I’ll use a flow chart to solve the equation:The solution to the equation is *s* = 235. They had $235 in savings. Check: When *s* = 235, + 250 = + 250  = 117.50 + 250 = 367.50.” | Writes and solves an inequality to answer an applied problem.*Toby has $55 to spend to take friends and one of their parents to a movie. An adult ticket costs $12. A student ticket costs $8. What is the maximum number of friends Toby can invite?*“Let *n* represent the number of student tickets Toby buys. Toby also buys 1 adult ticket. 8*n* + 12 ≤ 55.I’ll use a flow chart to solve the related equation: Toby can buy 5 student tickets, so can invite 4 friends. Check: When *n* = 5, 12 + 8*n* = 12 + 8(5)  = 12 + 40  = 52$52 < $55If Toby buys any more tickets, the cost would be greater than $55. My answer is correct.” |

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| **Observations/Documentation** |
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