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| **Solving Linear Equations Algebraically** |
| Creates an equation involving two operations and integersI started with the equation *x* = –6.I multiplied both sides by 8.  8*x* = –48Then, I added 15 to each side. 8*x* + 15 = –33 | Solves an equation of the form *ax* + *b* = *c*, where *a*, *b*, and *c* are integers, symbolically and checks solution 8*x* + 15 = –33To isolate the variable, I will subtract 15 from each side.8*x* + 15 – 15 = –33 – 15 8*x* = –48To determine the value of *x*, I will divide each side by 8. =  *x* = –6 | Solves an equation of the form + *b* = *c*, where *a*, *b*, and *c* are integers and *a* ≠ 0, symbolically and checks solution + 2 = 9To isolate the variable, I will subtract 2 from each side.+ 2 – 2 = 9 – 2 = 7To determine the value of *x*, I will multiply each side by 8. 8 × = 8 × 7 *x* = 56 | Applies their understanding of writing and solving equations to a real-life scenario, including explaining what the solution representsMarcus is participating in the Terry Fox Run.Five people each sponsor them for the same amount of money.Marcus donates $10 of their own.In all, Marcus collects $110.How much did each person sponsor Marcus?My equation to represent this situation is:  5*x* + 10 = 1105*x* + 10 – 10 = 100 – 10 5*x* = 100 =  *x* = 20Each person sponsored Marcus $20. |
| **Observations/Documentation** |
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