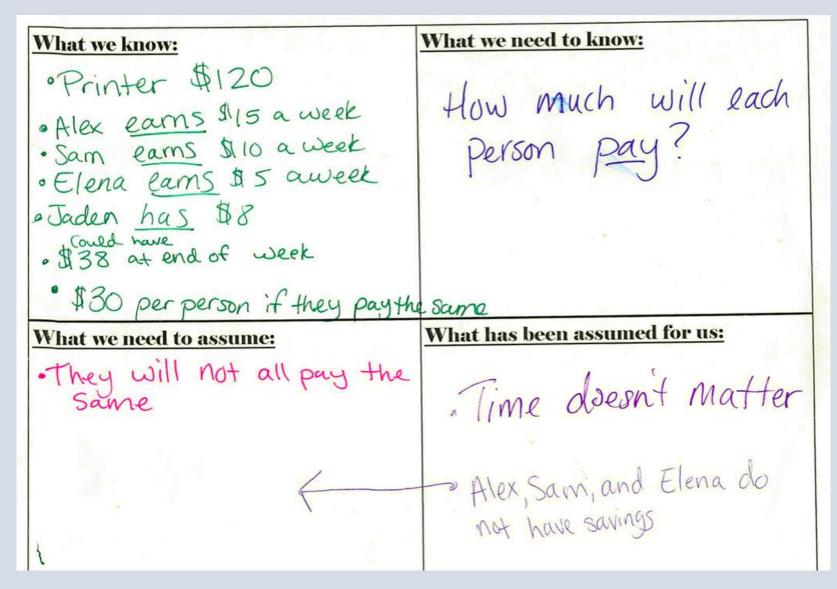
# M2C3 Project – Abuelo's Birthday Student Work

The following provides Grade 3, 4, and 5 solutions for the Abuelo's Birthday Task. The two slides at the end of this document provide a sample solution path graphic organizer and teacher reactions to student solutions.

### Making Sense of the Task: Group Brainstorm

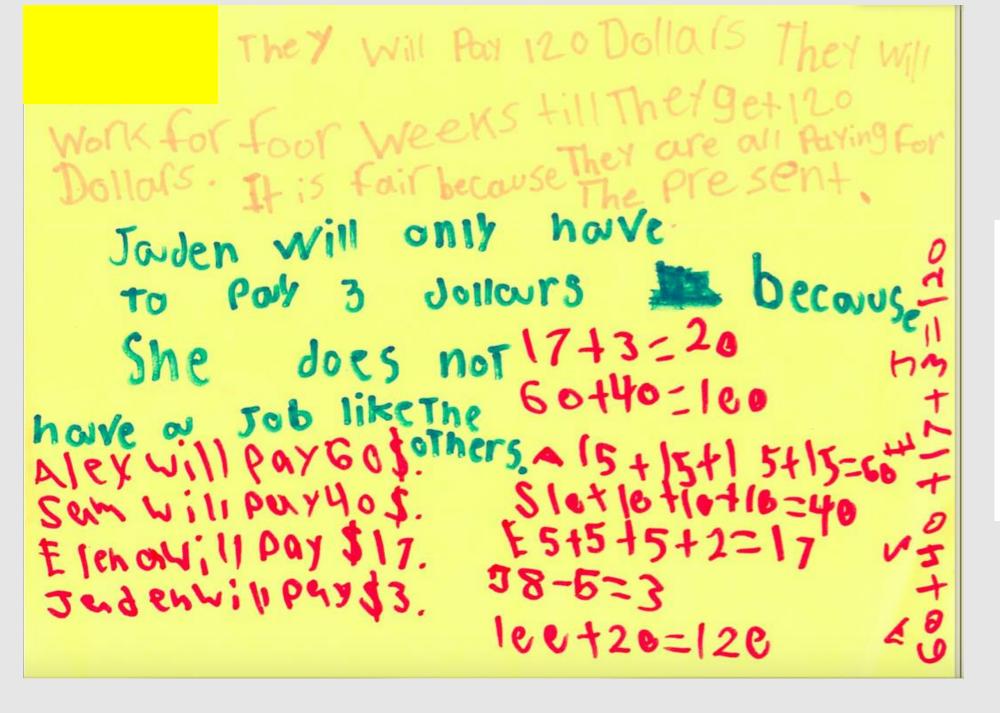


## Factors that Students Considered

- How much time do they need?
- Should all siblings contribute money for the same amount of time?
- Should we consider money saved, or just weekly earnings?
- Should siblings give all of their weekly earning for the present, or a portion of their weekly earnings?
- Do we need to consider/include tax?

# Connections to Students' Experiences

- Sharing responsibilities and jobs, everyone contributes, no one is left out
- Nuanced understandings about fairness



3<sup>rd</sup> grade

Each sibling contributes 4 weeks of earnings, so siblings' contributions are proportional to their weekly earnings.

The youngest sibling contributes \$3 because she does not have a job.

Adele and DONIAIC apper0 1-19-17 Birthday 4<sup>th</sup> grade ASSUME · That each of them can pay for part of the printer. Each sibling Jades Elena . Abuelo'S BIFTAday 1511 (3 WREKS contributes 3 weeks (18) 15=15×3 weeks 45 . That the older kids already had saved some money. of earnings,. 30 This is not enough +30=120 dollars money, so the older apen would have to save \$22 10 KIRX WITT Par MYS FOR TAR PRIJER siblings each Pay to the PAINTO contribute more from Sam will pay \$30 for the printer. Rut she Probaboy Voulait erena Will Par Als ton for fing weineed their savings, with the Wary to 20 that. So made a Few of the older kids \$ 30 more siblings who earn in the state Jalen will pay her 18 for the prater would be willing to pay say to pay for the more contributing of the movey they alredy printer. Some of the older kids may savel. more. be willing to pay some of the \$ they all ready gaved. Alex's savings Sam's Elenas The youngest sibling SAX-19 Sec. 125 \$60 \$ 20 \$40 contributes all her give give savings. =\$22 19 \$7 \$6

an 4<sup>th</sup> We think it is fair because ASSUMPTIONS grade - They might get it at a store. Sam spentitio each person is spending a weeks of their allowance -Alex Alex Spent St. 60 - Jayden is going-tood \$4. Saved VP#20 -Sam has 2019 Saved up and layden is spending Elona Spert \$20 Each sibling contributes 2 - Elenalhass Soverup 54 which is half of Jaydon spent\$4 Tax=#+ weeks of -4 weeks until a buebs birthdue. earnings, plus her allowance. The rust of the the same money was from Savings amount from that they had before. I How You can use it their savings. Mathematical Thinking Ennings Suring 30 + 20 + 10=60 na diffrent situation Savings The youngest Alex-30\$ sibling 30t 20+10=60 Elena-10\$ is in Yeal I Fe. Like if reek an-20 contributes Weeka Alex-15# sam-10\$ 60+60=120.00 In 1115 Some body b-day and ther A|x-1|5 = 30half of her Elena-5\$ Sam-1310 = 20 11, People what to get the same savings (\$4 for \$\$ +120\$=128.00. Elenas 5 = 10tax). iota: 129 dollars they ran use this stratigor

14 Weeks in all-about 4 months. Alex-2 Weeks-90 Sam-4 Weeks-90 Elena-8 weeks-90 Little Kid-0 weeks-1\$4 tax

Older siblings each contribute the same total amount (\$40), but they each need to save their earnings for different amounts of time (2 weeks, 4 weeks, 8 weeks).

But then students added the weeks (2+4+8=14), not considering that money is earned concurrently.

The youngest sibling contributes \$4 for tax.

Cach kid except the First grader gets to dollars to help pay for the printer

0.00

Solitan

20-3=40

20.00-11999=14

5th

grade

### Structure for Recording/Reporting Solutions

Assumptions: Jaden Should not Pay because She dose not erean money ones a week Alex Pays the most because she eren the most but Juden dosent eren Money	Juden' \$0 \$	
Mathematical thinking: 50 + 40 = 90 90 + 30 = 120	How could you use your plan in a different situation? ME UND MY Sister WUNT to Div a Big cumdy its \$399# I Make \$2 a Week she Makes \$3 a Week NE desidid she WILL PAY MOVE because she erens More	

3<sup>rd</sup> grade

## **Teacher Reflections**

- "Students had plenty of experiences saving up to buy something important" -- 4<sup>th</sup> grade teacher
- "All kids were excited and actually engaged for the entire session" --3<sup>rd</sup> grade teacher
- "Students wanted to alter the conditions of the task and make Jaden get a job" -- 5<sup>th</sup> grade
- "Students that don't participate regularly participate in these modeling tasks. They want to share their ideas and perspectives and they have a lot of say about fairness" -- 4<sup>th</sup> grade teacher