

Matt, age 11, Expert

The average worker is slower than Armida. In one day (an 8-hour shift), the new person will 40% of Armida's salmon.

I took these steps to get my answer:

1. I figured out how many seconds 8 hours is by multiplying it by 60 twice, or 60^2 . (8 hours * 60 * 60 = 28,800 seconds)

2. I figured out how many salmon Armida could tag by dividing my answer by four because Armida can only tag one salmon every four seconds. (28,800 seconds / 4 = 7,200 salmon)

3. I divided 70,000 salmon by 2 shifts and then by 6 workers to find out how many salmon the average worker tags every day. (70,000 salmon / 2 shifts / 6 workers = 5,833 $\frac{1}{3}$)

4. I compared 5,833 $\frac{1}{3}$ (my step 3 answer) with 7,200 (my step 2 answer) to get my answer. (7,200 for Armida > 5,833 $\frac{1}{3}$ for average worker)

Extra: I divided 28,800 by 10 to find out how many salmon a new person could tag in one 8-hour shift. (28,800 seconds / 10 = 2,880 salmon). I then divided this by 7,200 and multiplied this answer by 100 to get my answer. (2,880 / 7,200 * 100 = 40%)

One advantage to being able to look in the "back office" for students' solutions is that I can see that Matt didn't have this complete and clear solution on his first try.

He actually had four exchanges with his mentor before getting to this final draft. He took to heart the idea that problem solving and communication is not something to finish and be "over and done" but instead it is a process!

Scoring Rubric

A **problem-specific rubric** can be found linked from the problem to help in assessing student solutions. We consider each category separately when evaluating the students' work, thereby providing more focused information regarding the strengths and weaknesses in the work.

We hope these packets are useful in helping you make the most of Math Fundamentals Problems of the Week. Please let me know if you have ideas for making them more useful.

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