

THE *MATHLINKS* RUBRIC

Choose statements from **M**, **A**, and **R** that are appropriate to the task.

M Math (SMP 6)

1. Math is done correctly (computations, procedures, diagrams)
2. Vocabulary is used properly

A Applications / Modeling Context (SMP 1, 4)

1. Information and representations are used appropriately
2. Solutions satisfy problem requirements, including quantities and units

R Reasoning (SMP 3)

1. Solutions and strategies are justified
2. Explanations are clear and flow logically

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Bradley Bron

BROWNIE PROBLEM PART 1

Mateo has 5 brownies. He keeps one brownie for himself, gives $\frac{1}{4}$ of a brownie to his dad, and then divides the remaining brownies among three friends.



1. How much brownie does each friend get? Show your work or explain your thinking.

$$5 \times 4 = 20 = \frac{20}{4} - \frac{4}{4} - \frac{16}{4} - \frac{4}{4} = \frac{15}{4}$$

$$15 \div 3 = 5$$

$$\frac{5}{4} \text{ final}$$

Ramon

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1. How much brownie does each friend get? Show your work or explain your thinking.

$$= 15 \text{ pieces when divided into } \frac{1}{4}\text{'s}$$

$$15 \div 3 = 5 \text{ so that means each friend get 5 pieces of brownies}$$

Evelyn

BROWNIE PROBLEM PART 1

Mateo has 5 brownies. He keeps one brownie for himself, gives $\frac{1}{4}$ of a ^{one} brownie to his dad, and then divides the remaining brownies among three friends.



1. How much brownie does each friend get? Show your work or explain your thinking.

Mateo gets one whole brownie, his dad gets a quarter brownie and his friends get $1\frac{1}{4}$ of brownies. I got the answer by taking away one brownie then taking away 3 brownies one for each of his 3 friends then I divided the remaining brownie into 4 fourths then I took away one fourth for his dad which leaves 3 fourths. Finally I gave one fourth to his 3 friend which left me with brownies.

Valeria

BROWNIE PROBLEM PART 1

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1. How much brownie does each friend get? Show your work or explain your thinking.



They each get $1\frac{1}{4}$.

BROWNIE PROBLEM PART 1



Mateo

Mateo has 5 brownies. He keeps one brownie for himself, gives $\frac{1}{4}$ of a brownie to his dad, and then divides the remaining brownies among three friends.

1. How much brownie does each friend get? Show your work or explain your thinking.
2. Suppose Mateo gives $\frac{1}{4}$ of a brownie to his dad first, keeps one brownie for himself, and then divides the rest of the brownies among his friends. Does this change the result? Explain.

BROWNIE PROBLEM PART 2

Mateo has 5 brownies. He keeps one brownie for himself, gives $\frac{1}{4}$ of a brownie to his dad, and then divides the remaining brownies among three friends.



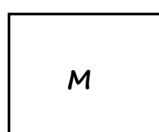
Mateo



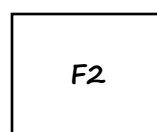
Zara

- To find how much brownie each friend gets, Zara drew this picture.
Give constructive feedback and suggestions to Zara to improve the picture.

Zara lets M stand for Mateo, D for dad, and F1, F2, and F3 for the 3 friends.



F1	F3
F2	D



- Emmett used numbers to find the correct amount of brownie each friend gets. Give constructive feedback to Emmett to make the mathematics more precise.

$$5 - 1 = 4 - \frac{1}{4} = 3\frac{3}{4} \div 3 = 1\frac{1}{4} \text{ for each friend}$$



Emmett

BROWNIE PROBLEM PART 3

Mateo has 5 brownies. He keeps $\frac{1}{4}$ of all of the brownies for himself, gives $\frac{1}{2}$ of a brownie to his dad and $\frac{1}{2}$ of a brownie to each of his three friends. How much brownie is left over?



Mateo

Solve the problem using a picture. Then use numbers (expressions / equations) or words to support your thinking.