LESSON MAKER PRO

Reasoning Reality Check

Build an argument, then test the math.

GRADE 7 · 7.MP.3

7.MP.3 "Construct viable arguments and critique the reasoning of others."

NAME _____ DATE _____

MAKE IT HOLD UP

A viable argument uses the correct operation, shows the math, and checks that the result fits the situation. When you critique a claim, name the error and give evidence for the correct result.

WORKED EXAMPLE

Twenty-one stickers are shared equally among 3 club tables. Kai says each table gets 7 stickers. Is Kai's claim viable?

1. Divide: 21 / 3 = 7.
2. Check: 3 x 7 = 21.
3. The check matches the total.

Answer: Yes. Each table gets 7 stickers.

PRACTICE 5 problems

1 Sixteen markers are shared equally by 4 art teams. Ava says each team gets 12 markers because 16 - 4 = 12. Critique Ava's reasoning.

ANSWER _____

2 A game pass costs $5. Mia has $30 and says she can buy 6 passes. Is her claim viable? Show a check.

ANSWER _____

3 A fundraiser earns $45 by selling 9 identical snack bags. Leo says each bag costs $5. Is Leo correct?

ANSWER _____

4 A runner completes 5 equal laps totaling 2 1/2 miles. Nia says each lap is 1/2 mile. Does her reasoning work?

ANSWER _____

5 A student practices video editing for 2/5 hour each day for 10 days. He says the total is 4 1/2 hours. Critique his claim.

ANSWER _____

APPLY IT Show your work

1 At the school dance, glow bracelets cost $2.50 each. The treasurer has $45 and says the group can buy 16 bracelets because 45 - 2.50 = 42.50. Critique the reasoning. How many bracelets can the group buy?

WORK SPACE

ANSWER _____

2 A walking club uses a route that is 1 1/4 miles long. The route has 5 equal loops. Priya says each loop is 1/4 mile because 5 x 1/4 = 1 1/4. Is Priya's argument viable?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A game store takes 25% off a $36 headset, then adds a $4 service fee. Sam says the final cost is $31 because 25% of 36 is 9, and 36 - 9 + 4 = 31. Lee says the final cost is $27 because 36 - 9 = 27. Whose argument is viable? Explain.

WORK SPACE AND ANSWER

ANSWER KEY

Reasoning Reality Check

GRADE 7 · 7.MP.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Sixteen markers are shared equally by 4 art teams. Ava says each team gets 12 markers because 16 - 4 = 12. Critique Ava's reasoning.	**Ava is incorrect. Sharing equally means divide: 16 / 4 = 4 markers per team. Check: 4 x 4 = 16.**
2	A game pass costs $5. Mia has $30 and says she can buy 6 passes. Is her claim viable? Show a check.	**Yes. 30 / 5 = 6 passes. Check: 6 x 5 = 30.**
3	A fundraiser earns $45 by selling 9 identical snack bags. Leo says each bag costs $5. Is Leo correct?	**Yes. 45 / 9 = 5. Check: 9 x 5 = 45.**
4	A runner completes 5 equal laps totaling 2 1/2 miles. Nia says each lap is 1/2 mile. Does her reasoning work?	**Yes. 2 1/2 / 5 = 1/2. Check: 5 x 1/2 = 2 1/2.**
5	A student practices video editing for 2/5 hour each day for 10 days. He says the total is 4 1/2 hours. Critique his claim.	**The claim is incorrect. 10 x 2/5 = 4 hours, not 4 1/2 hours.**

PART 2 · APPLY IT

1. **The reasoning is incorrect. The group can buy 18 bracelets.** To find how many equal-cost bracelets $45 buys, divide: 45 / 2.50 = 18. Subtracting one bracelet price does not find the number of bracelets.
2. **Yes. Each loop is 1/4 mile.** Priya's multiplication check is correct: 5 x 1/4 = 5/4 = 1 1/4. Her claim matches the total route length.

CHALLENGE

Sam's argument is viable. The discount makes the price $27, then the $4 service fee gives a final cost of $31.

Accept equivalent calculations and clear checks that match the situation. For critiques, students should identify the incorrect operation or missing step and state the corrected result.