LESSON MAKER PRO

Close Enough?

Estimate first, then judge the result.

GRADE 5 · 5.N.3.1

5.N.3.1 "Estimate sums and differences of fractions with like and unlike denominators, mixed numbers, and decimals to assess the reasonableness of the results."

NAME _____ DATE _____

ESTIMATE AND CHECK

Round each number to the nearest whole or half. For a mixed number, round its fraction part to 0, 1/2, or 1. Add or subtract the rounded numbers, then use your estimate to decide whether a result makes sense.

WORKED EXAMPLE

Estimate 1 1/9 + 2 7/8. Is a result of 9 reasonable?

1. 1 1/9 rounds to 1.
2. 2 7/8 rounds to 3.
3. Add: 1 + 3 = 4.
4. 9 is far from 4, so 9 is not reasonable.

Answer: Estimate: 4. A result of 9 is not reasonable.

PRACTICE 6 problems

1 Estimate 1/8 + 3/4.

ANSWER _____

2 Estimate 7/10 - 1/5.

ANSWER _____

3 Estimate 2 2/3 + 1 1/6.

ANSWER _____

4 Estimate 3.8 - 1.2. Is 2.5 a reasonable result?

ANSWER _____

_____

5 Estimate 4 4/5 - 1 1/10. Is 1 1/2 a reasonable result?

ANSWER _____

_____

6 Estimate 5/12 + 1/3. Is 3/4 a reasonable result?

ANSWER _____

_____

APPLY IT Show your work

1 Two game updates need 2.3 GB and 1.6 GB of space. Estimate how much space they need in all. Is 4 GB a reasonable total?

WORK SPACE

ANSWER _____

2 A class has 3 1/8 yards of ribbon and uses 1 5/6 yards for team banners. Estimate how much ribbon is left. Is 4 yards a reasonable amount?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A student says 5/8 + 7/12 must equal 1 because both fractions round to 1/2. Is the student correct? Find the exact sum and explain in two sentences how an estimate can differ from an exact answer.

WORK SPACE AND ANSWER

ANSWER KEY

Close Enough?

GRADE 5 · 5.N.3.1

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Estimate 1/8 + 3/4.	**1**
2	Estimate 7/10 - 1/5.	**1/2**
3	Estimate 2 2/3 + 1 1/6.	**3 1/2**
4	Estimate 3.8 - 1.2. Is 2.5 a reasonable result?	**Estimate: 3. Yes, 2.5 is reasonable.**
5	Estimate 4 4/5 - 1 1/10. Is 1 1/2 a reasonable result?	**Estimate: 4. No, 1 1/2 is not reasonable.**
6	Estimate 5/12 + 1/3. Is 3/4 a reasonable result?	**Estimate: 1. Yes, 3/4 is reasonable.**

PART 2 · APPLY IT

1. **Estimate: 4 GB. Yes, 4 GB is reasonable.** Round 2.3 GB to 2.5 GB and 1.6 GB to 1.5 GB. Their sum is 4 GB.
2. **Estimate: 1 yard. No, 4 yards is not reasonable.** Round 3 1/8 yards to 3 yards and 1 5/6 yards to 2 yards. About 3 - 2 = 1 yard is left.

CHALLENGE

No, 5/8 + 7/12 = 1 5/24. Both fractions round to 1/2, so 1 is an estimate rather than the exact sum.

Accept equivalent forms of the estimates and exact sum. For reasonableness questions, accept explanations that compare a proposed result with the estimate or calculate the exact result.