LESSON MAKER PRO

Fraction Mission Control

Find common denominators, solve, and simplify.

GRADE 5 · 5.CE.2

5.CE.2 "The student will estimate, represent, solve, and justify solutions to single-step and multistep problems, including those in context, using addition and subtraction of fractions with like and unlike denominators (with and without models)..."

NAME _____ DATE _____

MAKE DENOMINATORS MATCH

When fractions have unlike denominators, find the least common multiple to make a least common denominator. Rewrite each fraction as an equivalent fraction, add or subtract, then simplify your answer. Use benchmarks such as 0, 1/2, and 1 to estimate before you solve.

WORKED EXAMPLE

Solve 3/5 + 1/8.

1. The LCM of 5 and 8 is 40.
2. 3/5 = 24/40 and 1/8 = 5/40.
3. 24/40 + 5/40 = 29/40.

Answer: 29/40

PRACTICE 6 problems

1 Find the least common multiple of 4 and 6.

ANSWER _____

2 Estimate, then solve: 2/6 + 4/10

ANSWER _____

3 Solve and simplify: 2 4/6 - 2/10

ANSWER _____

4 Solve and simplify: 4/12 + 6/10

ANSWER _____

5 Solve and simplify: 6 2/4 - 4 2/6

ANSWER _____

6 Use the model to solve: [2/3] [2/3] [2/3] [2/3] [2/3] [2/3]. Write a multiplication equation and find the total.

ANSWER _____

APPLY IT Show your work

1 The art club prints 10 identical badge sheets. Each sheet uses 2/10 of a pack of sticker paper. The model shows the 10 equal groups: [2/10] [2/10] [2/10] [2/10] [2/10] [2/10] [2/10] [2/10] [2/10] [2/10]. How many packs of sticker paper does the club use?

WORK SPACE

ANSWER _____

2 The media club has 4 2/6 hours to finish a video. The club uses 2/4 hour to record narration and 2/10 hour to add captions. How much time is left?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Without first finding the exact difference, decide whether 4 2/6 - 2 4/10 is greater than or less than 2. Then solve exactly and explain why your decision makes sense.

WORK SPACE AND ANSWER

ANSWER KEY

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the least common multiple of 4 and 6.	**12**
2	Estimate, then solve: 2/6 + 4/10	**Estimate: 1; exact answer: 11/15**
3	Solve and simplify: 2 4/6 - 2/10	**2 7/15**
4	Solve and simplify: 4/12 + 6/10	**14/15**
5	Solve and simplify: 6 2/4 - 4 2/6	**2 1/6**
6	Use the model to solve: [2/3] [2/3] [2/3] [2/3] [2/3] [2/3]. Write a multiplication equation and find the total.	**6 × 2/3 = 4**

PART 2 · APPLY IT

1. **2 packs** Multiply 10 × 2/10. Ten groups of 2/10 make 20/10, which simplifies to 2.
2. **3 19/30 hours** Subtract both times used: 4 2/6 - 2/4 - 2/10. Rewrite with common denominators and simplify to 3 19/30.

CHALLENGE

Less than 2; 4 2/6 - 2 4/10 = 1 14/15. Since 4 1/3 is less than 4 2/5, subtracting 2 2/5 gives a difference less than 2.

Accept equivalent fractions in student work, but require final fraction answers in simplest form. For the estimate in problem 2, accept a reasonable benchmark estimate of 1.