LESSON MAKER PRO

Fraction Pathways

Add and subtract equal-denominator fractions with models.

GRADE 4 · TEKS 4.3.E

4.3.E "represent and solve addition and subtraction of fractions with equal denominators using objects and pictorial models that build to the number line and properties of operations;"

NAME _____ DATE _____

SAME-SIZE PARTS

When fractions have the same denominator, their parts are the same size. Add or subtract the numerators, and keep the denominator the same. Fraction bars and number lines can help you see the parts.

WORKED EXAMPLE

Use the fraction bars to find 5/13 + 6/13.

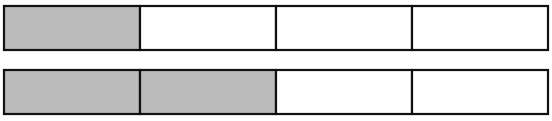


1. Both fractions are made of thirteenths.
2. Add the shaded parts: 5 + 6 = 11.
3. Keep the denominator 13.
4. Write 11/13.

Answer: 11/13

PRACTICE 6 problems

1 What sum do the fraction bars show?



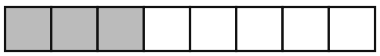
ANSWER _____

2 The first bar shows the amount at the start. The second bar shows the amount removed. What fraction remains?

Amount at start



Amount removed



ANSWER _____

3 Find the sum: 2/9 + 1/9 = ___.

ANSWER _____

4 Find the difference: 8/10 - 4/10 = ___.

ANSWER _____

5 Find the sum: 3/7 + 1/7 = ___.

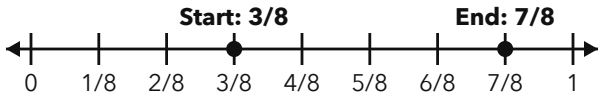
ANSWER _____

6 Find the difference: 9/12 - 2/12 = ___.

ANSWER _____

APPLY IT Show your work

1 The number line shows when Jalen started and ended soccer practice. How long did he practice?



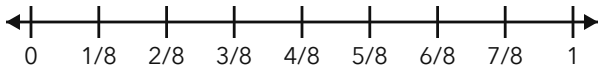
ANSWER _____

2 At coding club, 7/10 of a robot course is marked complete. The team finds errors in 3/10 of the course, so those sections are marked incomplete. What fraction of the course stays marked complete?

WORK SPACE

ANSWER _____

3 Use real fraction pieces with teacher support. Make two identical paper whole strips, divide each into eight equal parts, and cut one into eighths while keeping the other as the whole reference. Place one eighth and two more eighths against the reference to model 1/8 + 2/8. Next place seven eighths, remove three, and model 7/8 - 3/8. On separate paper draw each arrangement and write its equation. On the number line below mark the sum, then use a backward arrow to show the subtraction. Explain why the denominator remains 8.



ANSWER _____

CHALLENGE One step up

Noor says 1/8 + 2/8 = 3/16 because the denominators should be added. Use the fraction bars to explain Noor's error. Then write the correct sum.



WORK SPACE AND ANSWER

ANSWER KEY # Fraction Pathways

GRADE 4 · TEKS 4.3.E

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	What sum do the fraction bars show?	**3/4**
2	The first bar shows the amount at the start. The second bar shows the amount removed. What fraction remains?	**4/8, or 1/2**
3	Find the sum: 2/9 + 1/9 = ___.	**3/9, or 1/3**
4	Find the difference: 8/10 - 4/10 = ___.	**4/10, or 2/5**
5	Find the sum: 3/7 + 1/7 = ___.	**4/7**
6	Find the difference: 9/12 - 2/12 = ___.	**7/12**

PART 2 · APPLY IT

1. **4/8 hour, or 1/2 hour** Subtract the start time from the end time: 7/8 - 3/8 = 4/8. Simplify 4/8 to 1/2.
2. **4/10, or 2/5** Subtract the sections marked incomplete from the sections first marked complete: 7/10 - 3/10 = 4/10. Simplify 4/10 to 2/5.
3. **1/8 + 2/8 = 3/8; 7/8 - 3/8 = 4/8 = 1/2. The whole and equal eighth-sized pieces stay the same.** Provide equal-whole paper strips and safe cutting support or precut eighths. Check actual combining/removing, matching drawings/equations, a sum point at3/8 and subtraction arrow from7/8 to4/8. Accept supported explanations tied to the unchanged eighth-sized parts.

CHALLENGE

The parts are eighths, so the denominator stays 8. 1/8 + 2/8 = 3/8.

Accept equivalent simplified forms, such as 1/2 for 4/8 and 2/5 for 4/10. For the challenge, accept an explanation that equal denominators name the same-size parts and should not be added.