

Topic C Quiz Prep (Lessons 10 – 14)

There will be 5 questions on this quiz. Practice each of the questions below to prepare.

Item #1: Add & Subtract Whole Numbers and Mixed Numbers.

$$5 - \frac{5}{6}$$

$$4\frac{6}{6} - \frac{5}{6}$$

$$4\frac{1}{6}$$

In this example, we renamed 5 into $4\frac{6}{6}$ in order to subtract the fraction.

$$2\frac{1}{4} + \frac{5}{7}$$

$$2\frac{7}{28} + \frac{20}{28}$$

$$2\frac{27}{28}$$

In this example, there was no fractional relationship between 4 and 7 so we had to rename both. We did so by multiplying 4×7 and making equivalent fractions using twenty-eighths.

$$8\frac{1}{4} - 2\frac{1}{6}$$

$$8\frac{6}{24} - 2\frac{4}{24}$$

$$6\frac{2}{24}$$

In this example, there was no fractional relationship between 4 and 6 so we had to rename both. We did so by multiplying 4×6 and making equivalent fractions using twenty-fourths.

$$(3\frac{1}{2} + 1\frac{1}{4}) - 2\frac{1}{6}$$

$$(3\frac{2}{4} + 1\frac{1}{4}) - 2\frac{1}{6}$$

$$4\frac{3}{4} - 2\frac{1}{6}$$

$$4\frac{9}{12} - 2\frac{2}{12} = 2\frac{7}{12}$$

Item #2: Estimate an expression to be less than , between 1 and 2, or greater than 2

In the first expression, $\frac{6}{7}$ is about one. So, adding one to something already larger than one, would mean the final answer is greater than 2.

In the second expression, $3 - 2$ is 1, but the fractional pieces would make it larger than one.

In the third expression, $\frac{14}{15}$ is larger than $\frac{12}{15}$, so the final answer would have to be less than 1.

Expression	Less Than 1	Between 1 and 2	Greater Than 2
$1\frac{1}{4} + \frac{6}{7}$			✓
$3\frac{2}{5} - 2\frac{1}{8}$		✓	
$1\frac{12}{15} - \frac{14}{15}$	✓		

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Item #3: Solve a word problem with mixed numbers and fractions.

Ava has $1\frac{2}{3}$ hours to complete a school project. She spends $\frac{5}{6}$ hours working on the project. How many hours remain for Ava to complete her project?

$$1\frac{2}{3} - \frac{5}{6}$$

$$1\frac{4}{6} - \frac{5}{6}$$

$$1\frac{4}{6} - \frac{4}{6} - \frac{1}{6}$$

$$1 - \frac{1}{6}$$

$$\frac{6}{6} - \frac{1}{6} = \frac{5}{6}$$

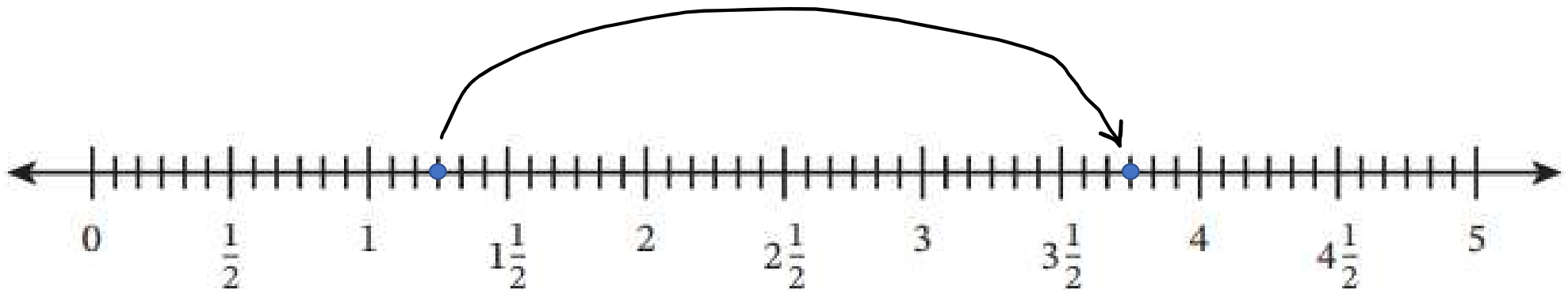
hours

Item #4: Use a number line to create a model

$$1\frac{1}{4} + 2\frac{3}{6}$$

$$1\frac{3}{12} + 2\frac{6}{12} = 3\frac{9}{12}$$

The first thing we had to do was make the fractional units the same. We changed 4 and 6 into 12's. Now that everything is in 12's we can easily use the number line to show the solution.



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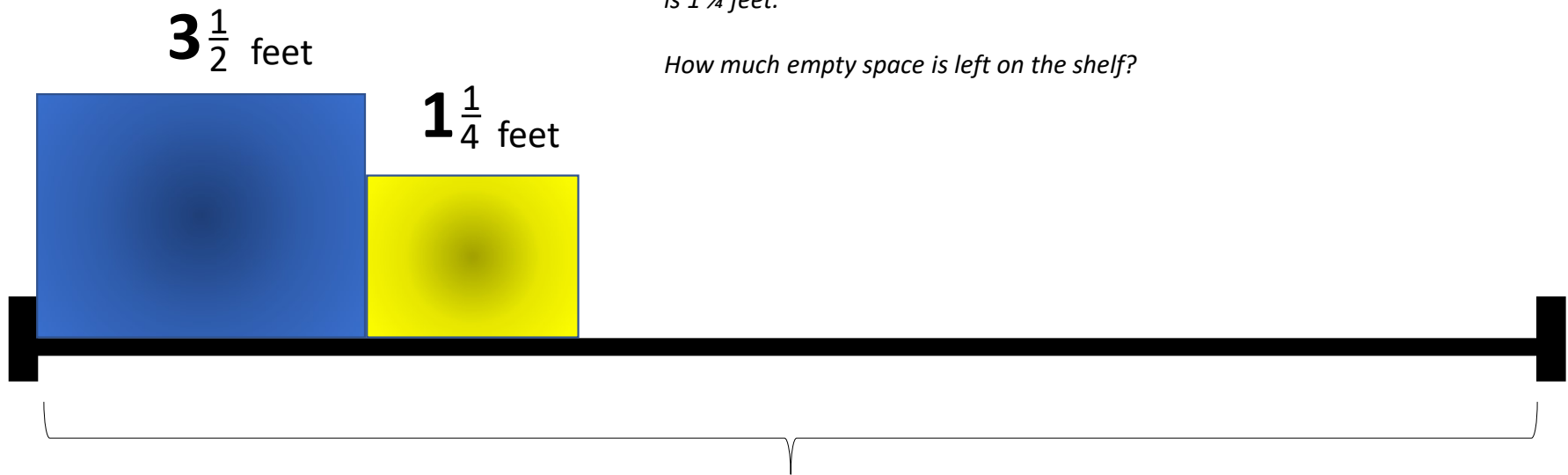
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Item #5: Mixed Number Word Problem

The whole shelf is $12\frac{1}{2}$ feet wide.

There are two boxes on the shelf right now. One box is $3\frac{1}{2}$ feet wide and the other box is $1\frac{1}{4}$ feet.

How much empty space is left on the shelf?



$$12\frac{1}{2} - (3\frac{1}{2} + 1\frac{1}{4})$$

$$12\frac{1}{2} \text{ feet}$$