

End of Module 2 Assessment Study Guide (Lessons 1 – 17)

There will be **10 questions** on this assessment. Be able to solve each of the problem-types below. This assessment covers all of Module 2 material. Using prior study guides is also a recommended way to prepare for this assessment.

Item 1: Understand how a division expression is a fraction.

$$(2 \div 3) + (1 \div 5)$$

is the same as

$$2/3 + 1/5$$

$$10/15 + 3/15$$

$$13/15$$

*Are the denominators the same?
Is there a relationship?*

No. We must change them both.

Item 2: Add and Subtract Fractions and Mixed Numbers with Unrelated Units

$$2/8 + 4/5$$

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

$$5 \frac{2}{5} - 1 \frac{4}{6}$$

$$(3 \frac{1}{5} - 1 \frac{2}{3}) + 4 \frac{1}{3}$$

$$10/40 + 32/40$$

$$1 \frac{5}{30} + 3 \frac{12}{30}$$

$$5 \frac{12}{30} - 1 \frac{20}{30}$$

Do what is inside the () first

$$42/40$$

$$4 \frac{17}{30}$$

We need to decompose here

$$(3 \frac{3}{15} - 1 \frac{10}{15}) + 4 \frac{1}{3}$$

$$1 \frac{2}{40}$$

$$5 \frac{12}{30} - 1 \frac{12}{30}$$

$$(3 \frac{3}{15} - 1 \frac{3}{15}) + 4 \frac{1}{3}$$

or

$$4$$

$$(2 - 7/15) + 4 \frac{1}{3}$$

$$1 \frac{1}{20}$$

$$4 - 8/30$$

$$(1 \frac{15}{15} - 7/15) + 4 \frac{1}{3}$$

$$1 \frac{8}{15} + 4 \frac{1}{3}$$

$$3 \frac{30}{30} - 8/30 = 3 \frac{22}{30}$$

$$1 \frac{8}{15} + 4 \frac{5}{15} = 5 \frac{13}{15}$$

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Item 3: Word Problems with Fractions and Mixed Numbers

Mrs. Miller cooks **9 cups of pasta**. She divides the pasta equally between **6 bowls**. Mrs. Miller then pours **1 $\frac{3}{4}$ cups of sauce** into each bowl. How many cups of pasta and sauce are in each bowl?

There are _____ cup of pasta and sauce in each bowl. $\frac{9}{6} + 1\frac{3}{4} \rightarrow \frac{18}{12} + 1\frac{9}{12} \rightarrow 1\frac{27}{12} \rightarrow 1+2\frac{3}{12} \rightarrow 3\frac{1}{4}$

Item 4: Understand Equivalent Fractions and How to Write them

A football team has 24 players. The team orders 9 pizzas to share equally after the game. Which expressions represent how much pizza each team member gets. **Choose ALL expressions that apply.**

$$\frac{9}{24}$$

$$9 \div 24$$

$$\frac{3}{8}$$

Item 5: Estimate fractions to the nearest $\frac{1}{2}$ or Whole

You need to determine if a box can hold the weight of 3 items by estimating the total weight of the items and the box itself. Estimate each fraction and EXPLAIN your THINKING.

Will the weight of the box and the items be greater than 4 pounds?

BOX WEIGHT = $\frac{1}{3}$ pound
ITEM #1 WEIGHT = $\frac{5}{6}$ pound
ITEM #2 WEIGHT = $\frac{3}{4}$ pound
ITEM #3 WEIGHT = $1\frac{2}{3}$ pound

Estimate each items first. Item #1 weighs less than 1 pound. Item 2 weighs less than 1 pound also. Item #3 weighs more than a pound but less than 2 pounds. The box weighs less than a pound. So, the combined weight of all items will be less than 4 pounds.

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Item 6: Evaluate an expression to see if it is correct.

$$\frac{1}{6} + \frac{3}{4} = \frac{2}{12} + \frac{9}{12} = \frac{11}{24}$$

Is the work above, correct?

If not, where was the error made?

A mistake WAS made, we never add the denominators.

Item 7: Use a fraction model to make like units

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



$$\frac{6}{10} - \frac{5}{10} = \frac{1}{10}$$

First shade in the fractions 3/5 and 1/2.

Next, made both bars into 10's to show your answer in the new fractional units.

Item 8: Multi-step Word problem with mixed #s.

Dorian has 11 ½ feet of fishing line.

- He uses 3 1/3 feet of the line to make a small lure.*
- He makes a large lure and uses 1 1/2 feet **more** fishing line that he uses to make the small lure.*
- He gives the rest of the fishing line to his friend.*

How much fishing line does Dorian give to his friend?

STEP #1

$$11 \frac{1}{2} - 3 \frac{1}{3}$$

$$11 \frac{3}{6} - 3 \frac{2}{6}$$

$$8 \frac{1}{6}$$

STEP #2

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

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

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

STEP #3

$$8 \frac{1}{6} - 4 \frac{5}{6}$$

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

$$4 - \frac{4}{6} = 3 \frac{1}{6} \text{ ft}$$

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Item 9: Complete the equation to show the sum of two fractions.

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \frac{9}{12}$$

Answer Choices:

1

2

3

4

5

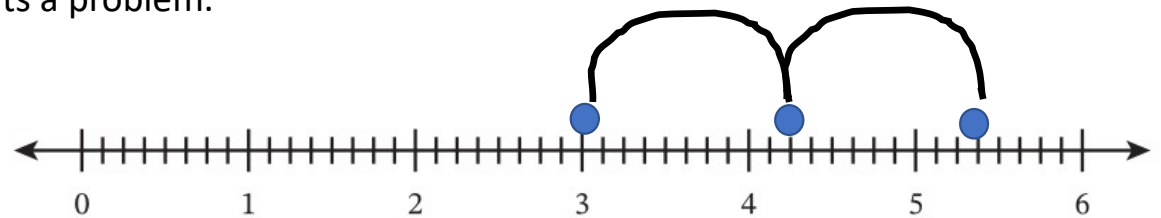
6

In this problem, you can only use the numbers provided in the answer choices. Notice how the final answer is $\frac{9}{12}$ but you do not have 12's as an answer choice. You will need to make equivalent fractions with what is provided. For example, here we can say $\frac{1}{2} + \frac{1}{4} = \frac{9}{12}$. Why? Because $\frac{9}{12}$ can become $\frac{3}{4}$ and $\frac{1}{2} + \frac{1}{4} = \frac{3}{4}$.

Item 10: Explain how a number line model represents a problem.

Paige is making decorations for the holiday. She has $5 \frac{3}{8}$ feet of ribbon. She uses $1 \frac{1}{8}$ feet to make a wreath and $1 \frac{1}{4}$ feet to decorate a tree. How many feet of ribbon was Paige have left?

EXPLAIN how the model represents the problem and the solution.



First rename all fractions into EIGHTHS because the number line shows eighths.

$$1 \frac{1}{4} = 1 \frac{2}{8}$$

Start by placing a dot at $5 \frac{3}{8}$. Next, move left $1 \frac{1}{8}$ for the wreath. That would be $4 \frac{2}{8}$.

Now, move left $1 \frac{2}{8}$ to cut the second amount of ribbon.