

Math
Released Item 2021
Grade 5

Fruit Salad
M500028PD

Prompt

M500028PD

The list shows the amount of each item needed in a fruit salad recipe. The recipe makes 5 servings.

- sugar: $\frac{4}{8}$ cup of brown sugar
- juice: $\frac{3}{8}$ cup of lemon juice, $\frac{2}{8}$ cup of orange juice
- fruit: $\frac{3}{8}$ cup of blueberries, 1 cup of grapes, $\frac{7}{8}$ cup of pineapple, $1\frac{1}{8}$ cups of strawberries

Part A

Which expressions are equivalent to the total number of cups of pineapple and blueberries in the fruit salad recipe?

Select the **two** correct expressions.

- A. $\frac{1}{8} + \frac{1}{8} + \frac{8}{8}$
- B. $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$
- C. $\frac{3}{8} + \frac{3}{8} + \frac{3}{8} + 1$
- D. $\frac{1}{8} \times 4$
- E. $\frac{1}{8} \times 8$
- F. $\frac{1}{8} \times 10$

Part B

What is the total number of cups of juice needed to make the recipe for 20 servings?

- A. $1\frac{1}{4}$
- B. $2\frac{1}{2}$
- C. $6\frac{1}{4}$
- D. $12\frac{1}{2}$

(Continues on next page)

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

Rubric

Parts A and B are machine scored.

M500028PD Rubric - Part A	
Score	Description
1	Modeling = 1 point: Student response is Option A and Option F.
0	Student response is incorrect or irrelevant.

M500028PD Rubric - Part B	
Score	Description
1	Computation = 1 point: Student response is Option B, $2\frac{1}{2}$.
0	Student response is incorrect or irrelevant.

M500028PD Holistic Rubric Part C

Score	Description
4	<p>Student response includes the following 4 elements:</p> <ul style="list-style-type: none"> • Modeling = 1 point: Valid explanation of how to adjust the recipe to make 30 servings of fruit salad • Modeling = 1 point: Valid explanation or work to find total amount of sugar needed for 30 servings, including correct computations • Modeling = 1 point: Valid explanation or work to find the total amount of juice needed for 30 servings, including correct computations • Modeling = 1 point: Valid explanation or work to find the total amount of fruit needed for 30 servings, including correct computations <p>Complete achievement of the goals of the task, the response is completely correct, and shows thorough understanding.</p> <p>Sample Student Response:</p> <p>The recipe makes 5 servings. To get 30 servings, the recipe would need to be used 6 times. I can multiply each item in the recipe by 6 to get the total amount of each item needed to make 30 servings.</p> <p>Sugar: $\frac{4}{8} \times 6 = \frac{24}{8} = 3$ cups</p> <p>Juices: $\frac{3}{8} + \frac{2}{8} = \frac{5}{8} \rightarrow \frac{5}{8} \times 6 = \frac{30}{8} = 3\frac{6}{8}$ cups</p> <p>Fruit: $\frac{3}{8} + 1 + \frac{7}{8} + 1\frac{1}{8} = 2\frac{11}{8} = 3\frac{3}{8}$</p> <p style="padding-left: 40px;">$3\frac{3}{8} \times 6 = \frac{27}{8} \times 6 = \frac{162}{8} = 20\frac{2}{8}$ cups</p> <p>Note: Three correct computations, with no explanation or work shown, receives a score point of 1.</p>
3	<p>Student response demonstrates both general achievement of the goals of the task and a less than thorough understanding.</p>
2	<p>Student response demonstrates both limited achievement of the goals of the task and a limited understanding.</p>
1	<p>Student response demonstrates both minimal achievement of the goals of the task and a minimal understanding.</p>
0	<p>Student response does not achieve any goals of the task nor demonstrates any understanding.</p>

Anchor Set

A1 – A15

With Annotations

Anchor papers are labeled using a capital “A” followed by the sequence number (e.g., A1, A2).

Anchor papers include

- The prompt.
- The student response.
- A score in the top right corner.

The annotation follows the anchor paper, and

- Is aligned to the rubric.
- Contains parts of the student response(s) that, based on the rubric, support the scoring of each element.
- Reflects the original spelling and grammar of student response(s).
 - Example of scoring element within an annotation, with student response language (in parentheses):
The correct fraction to represent the location of point G is given (the fraction equals $\frac{2}{6}$).
- May contain Scoring Decisions or clarifying notes.

The Anchor Set section is followed by a practice set with a scoring matrix. Annotations are not included in the Practice Set section.

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

Joey should add every category together, and then multiply it by six.

Here's how I did it:

$$\text{Fruit category: } \frac{3}{8} + 1 + \frac{7}{8} + 1\frac{1}{8} = 3\frac{3}{8}$$

$$\text{Juice category: } \frac{3}{8} + \frac{2}{8} = \frac{5}{8}$$

$$\text{Sugar category: } \frac{4}{8}$$

So, now I have to multiply each category by six:

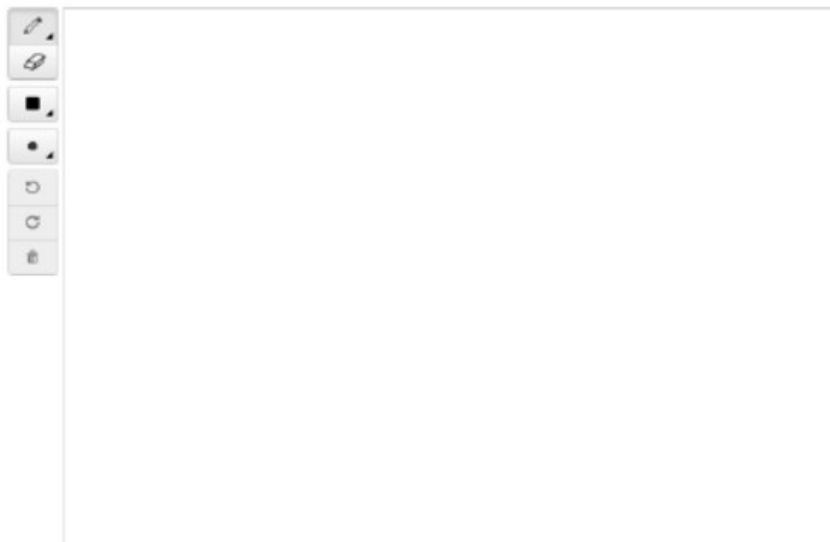
$$\text{Fruit category: } 3\frac{3}{8} \times 6 = 20\frac{2}{8}$$

$$\text{Juice category: } \frac{5}{8} \times 6 = 3\frac{6}{8}$$

$$\text{Sugar category: } \frac{4}{8} \times 6 = 3$$

So, you need 3 cups of sugar, $3\frac{6}{8}$ cups of juice, and $20\frac{2}{8}$ cups of fruit for a fruit salad that provides 30 servings.

Drawing Box



Annotation

Anchor Paper 1

Part C: Score Point 4

This response receives full credit. It includes each of the four required elements:

- A valid explanation of how to modify the recipe to make 30 servings is provided. The student response shows understanding that the recipe is adjusted by multiplying by 6 (Joey should add every category together, and then multiply it by six).
- A valid explanation or work to find the amount of sugar needed for 30 servings, including correct computation, is provided ($\frac{4}{8} \times 6 = 3$).
- A valid explanation or work to find the total amount of juice needed for 30 servings, including correct computation, is provided ($\frac{5}{8} \times 6 = 3\frac{6}{8}$). The student response correctly shows adding the amounts of lemon juice and orange juice to find the amount of juice needed for 5 servings. That amount is multiplied by 6 to find the total amount of juice needed for 30 servings.
- A valid explanation or work to find the total amount of fruit needed for 30 servings, including correct computation, is provided ($3\frac{3}{8} \times 6 = 20\frac{2}{8}$). The student response correctly shows adding each amount of fruit to find the amount of fruit needed for 5 servings. That amount is multiplied by 6 to find the total amount of fruit needed for 30 servings.

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

Joey should multiply every item by 6 because the first recipe made 5 servings and $6 \times 5 = 30$

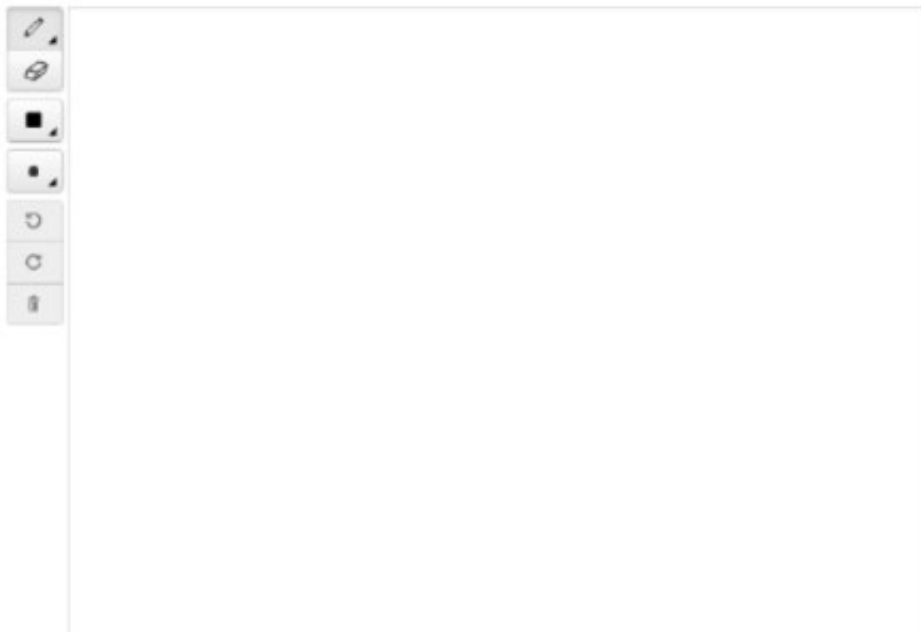
You need 3 cups of sugar

You need $3\frac{6}{8}$ cups of juice

You need $20\frac{2}{8}$ cups of fruit

$$\frac{4}{8} \times 6 = 3$$
$$\frac{5}{8} \times 6 = 3\frac{6}{8}$$
$$3\frac{3}{8} \times 6 = 20\frac{2}{8}$$

Drawing Box



Anchor Paper 2

Part C: Score Point 4

This response receives full credit. It includes each of the four required elements:

- A valid explanation of how to modify the recipe to make 30 servings is provided. The student response shows understanding that the recipe is adjusted by multiplying by 6 (Joey should multiply every item by 6).
- A valid explanation or work to find the amount of sugar needed for 30 servings, including correct computation, is provided ($\frac{4}{8} \times 6 = 3$).
- A valid explanation or work to find the total amount of juice needed for 30 servings, including correct computation, is provided ($\frac{5}{8} \times 6 = 3\frac{6}{8}$). The total amount of lemon juice and orange needed for 5 servings is multiplied by 6 to find the total amount of juice needed for 30 servings.

Note: Student response is not required to show the addition of the two kinds of juice to find the total for 5 servings to receive credit for this element.

- A valid explanation or work to find the total amount of fruit needed for 30 servings, including correct computation, is provided ($3\frac{3}{8} \times 6 = 20\frac{2}{8}$). The amount of fruit needed for 5 servings is multiplied by 6 to find the total amount of juice needed for 30 servings.

Note: The addition of all fruit amounts to find the total for 5 servings is not required to receive credit for this element.

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

Joey should multiply everything by 6 because 5 times 6 is 30.

$$\frac{4}{8} \times 6 = \frac{24}{8} \text{ cup of brown sugar}$$

$$\frac{5}{8} \times 6 = \frac{30}{8} \text{ cup of juice}$$

$$3 \frac{3}{8} \times 6 = \frac{162}{8} \text{ cup of fruit}$$

Drawing Box



Anchor Paper 3

Part C: Score Point 4

This response receives full credit. It includes each of the four required elements:

- A valid explanation of how to modify the recipe to make 30 servings is provided (should multiply everything by 6). The student response shows understanding that the recipe is adjusted by multiplying by 6.
- A valid explanation or work to find the amount of sugar needed for 30 servings, including correct computation, is provided ($\frac{4}{8} \times 6 = \frac{24}{8}$).
- A valid explanation or work to find the total amount of juice needed for 30 servings, including correct computation, is provided ($\frac{5}{8} \times 6 = \frac{30}{8}$). The total amount of lemon juice and orange needed for 5 servings is multiplied by 6 to find the total amount of juice for 30 servings.

Note: The addition of the two kinds of juice to find the total for 5 servings is not required to be shown to receive credit for this element.

- A valid explanation or work to find the total amount of fruit needed for 30 servings, including correct computation, is provided ($3\frac{3}{8} \times 6 = \frac{162}{8}$). The total amount of fruit needed for 5 servings is multiplied by 6 to find the total amount of juice needed for 30 servings.

Notes: The addition of all fruit amounts to find the total for 5 servings is not required to receive credit for this element.

The fractions are not simplified, which does not detract from receiving credit.

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

Joey should adjust the recipe by multiplying all the ingredients by 6. He should do that since the recipe is for 5 servings, and $30 \div 5 = 6$.

$\frac{4}{8}$ is the amount of sugar needed, so he should do $\frac{4}{8} \times 6 = 3$.

$\frac{5}{8}$ is the amount of juice needed, so he should do $\frac{5}{8} \times 6 = 3\frac{3}{4}$.

$3\frac{3}{8}$ is the amount of fruit needed, so he should do $\frac{27}{8} \times 6 = 30\frac{1}{4}$.

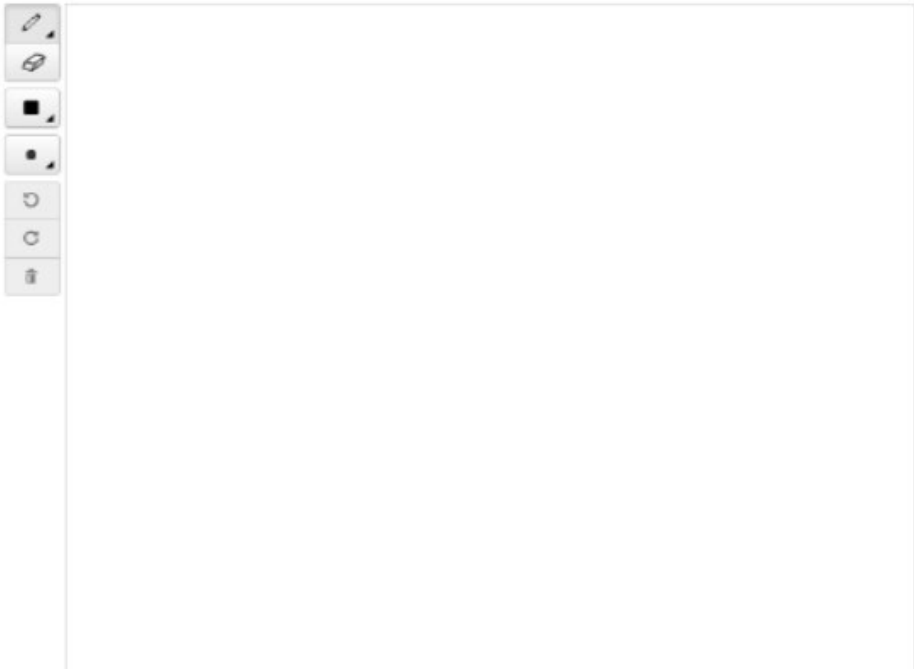
Joey needs;

3 cups of sugar

$3\frac{3}{4}$ cups of juice

$30\frac{1}{4}$ cups of fruit

Drawing Box



Anchor Paper 4**Part C: Score Point 3**

This response receives partial credit. It includes three of the four required elements:

- A valid explanation of how to modify the recipe to make 30 servings is provided. The student response shows understanding that the recipe is adjusted by multiplying by 6 (Joey should adjust the recipe by multiplying all the ingredients by 6).
- A valid explanation or work to find the amount of sugar needed for 30 servings, including correct computation, is provided ($\frac{4}{8} \times 6 = 3$).
- A valid explanation or work to find the total amount of juice needed for 30 servings, including correct computation, is provided ($\frac{5}{8} \times 6 = 3\frac{3}{4}$). The amount of lemon juice and orange juice needed for 5 servings is multiplied by 6 to find the total amount of juice for 30 servings.

Although the explanation or work to find the total amount of fruit needed for 30 servings is shown ($\frac{27}{8} \times 6$), the computation is incorrect ($30\frac{1}{4}$). The response must provide correct work with correct computation to receive credit for this element.

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

$$\frac{4}{8} \times \frac{6}{1} = \frac{24}{8} = 3 \text{ cups of brown sugar}$$

$$\frac{3}{8} + \frac{2}{8} = \frac{5}{8} \times \frac{6}{1} = \frac{30}{8} = 3\frac{6}{8} \text{ cups of juice}$$

$$\frac{3}{8} + \frac{7}{8} + \frac{8}{8} + \frac{9}{8} = \frac{27}{8} \times \frac{6}{1} = \frac{162}{8} = 20\frac{2}{8} \text{ cups of fruit}$$

Drawing Box

The drawing box contains two handwritten calculations. On the left, a vertical multiplication problem shows 27 multiplied by 6, resulting in 162. On the right, a long division problem shows 162 divided by 8, resulting in a quotient of 20 and a remainder of 2.

Anchor Paper 5

Part C: Score Point 3

This response receives partial credit. It includes each of the four required elements; however, a precision point is deducted:

- A valid explanation of how to modify the recipe to make 30 servings is provided. The work shown for all ingredients supports the understanding that the recipe is adjusted by multiplying by 6.

Note: No verbal explanation is included, but the understanding is shown in the work, since each ingredient is multiplied by 6.

- A valid explanation or work to find the amount of sugar needed for 30 servings, including correct computation, is provided ($\frac{4}{8} \times \frac{6}{1} = \frac{24}{8} = 3$).
- A valid explanation or work to find the total amount of juice needed for 30 servings, including correct computation, is provided ($\frac{3}{8} + \frac{2}{8} = \frac{5}{8} \times \frac{6}{1} = \frac{30}{8} = 3\frac{6}{8}$). The total amount of lemon juice and orange needed for 5 servings is multiplied by 6 to find the total amount of juice for 30 servings.
- A valid explanation or work to find the total amount of fruit needed for 30 servings, including correct computation, is provided ($\frac{3}{8} + \frac{7}{8} + \frac{8}{8} + \frac{9}{8} = \frac{27}{8} \times \frac{6}{1} = \frac{162}{8} = 20\frac{2}{8}$). The amount of fruit needed for 5 servings is multiplied by 6 to find the total amount fruit for 30 servings. The work is provided for finding the total amount of juice and fruit for 30 servings but includes run-on equations ($\frac{3}{8} + \frac{2}{8} \dots = 3\frac{6}{8}$).

Note: A Scoring Decision exists when a run-on equation occurs in a response and the response would have received the top score [score point 4 for this item] without the run-on equation, a precision score point will be deducted. This is a top score point response and a precision point is deducted for the run-on equation and the response scores a 3.

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

Joey should multiply the amount for one serving by 30 for all the ingredients

Sugar: $\frac{4}{8} \times \frac{30}{1} = \frac{120}{8} = 15$ cups of brown sugar for 30 servings

I multiplied the amount of brown sugar for one recipe by 30 to get the amount of brown sugar for 30 recipes.

Juice: $\frac{3}{8} + \frac{2}{8} = \frac{5}{8}$

$\frac{5}{8} \times \frac{30}{1} = \frac{150}{8} = 18 \frac{6}{8} = 18 \frac{3}{4}$ cups of juice for 30 servings

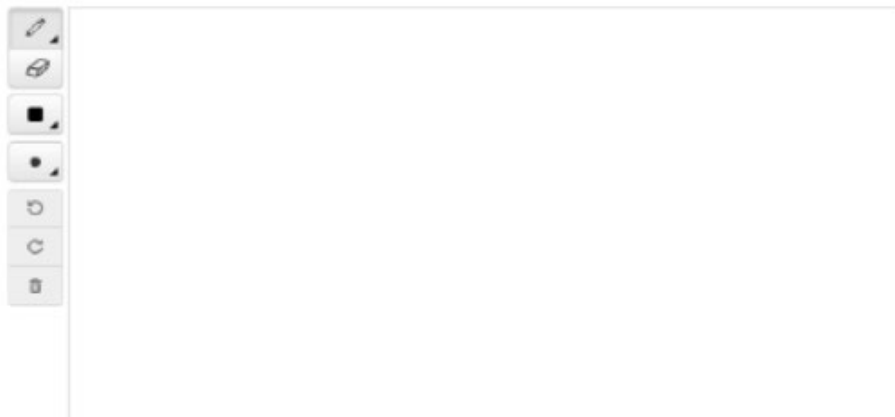
I added the amount of lemon juice for one serving by the amount of orange juice for one serving to get $\frac{5}{8}$. Then I took the amount of juice in total for both orange juice and lemon juice and multiplied it by 30 to get the amount of juice for 30 servings.

Fruit: $\frac{3}{8} + \frac{1}{1} + \frac{7}{8} + \frac{9}{8} = \frac{3}{8} + \frac{8}{8} + \frac{7}{8} + \frac{9}{8} = \frac{27}{8}$

$\frac{27}{8} \times \frac{30}{1} = \frac{810}{8} = 101 \frac{1}{4}$ cups of fruits for 30 servings

I added the amount of cups for one serving of all the fruits. Then I took the amount of fruits for one serving and multiplied by 30 to get the amount of fruits for 30 servings.

Drawing Box



Anchor Paper 6**Part C: Score Point 3**

This response receives partial credit. It includes three of the four required elements:

- A valid explanation or work to find the amount of sugar needed for 30 servings, including correct computation, is provided ($\frac{4}{8} \times \frac{30}{1} = \frac{120}{8} = 15$).
- A valid explanation or work to find the total amount of juice needed for 30 servings, including correct computation, is provided ($\frac{5}{8} \times \frac{30}{1} = 18\frac{6}{8}$). The student response correctly shows adding the amounts of lemon juice and orange juice to find the total juice needed for 5 servings. That amount is multiplied by 30 to find the total amount of juice for 30 servings.
- A valid explanation or work to find the total amount of fruit needed for 30 servings, including correct computation, is provided ($\frac{27}{8} \times \frac{30}{1} = \frac{810}{8} = 101\frac{1}{4}$). The student response correctly shows adding all fruit amounts to find the total fruit needed for 5 servings. That amount is multiplied by 30 to find the total amount of fruit for 30 servings.

The explanation of how to modify the recipe to make 30 servings is incorrect (should multiply the amount for one serving by 30 for all the ingredients). The student response indicates misunderstanding that the given amounts are for 1 serving instead of 5 and multiplies each ingredient by 30.

Note: A Scoring Decision exists when elements in the rubric are independent of each other. If a response makes an error in a previous element and uses the incorrect answer in the next element, the response can receive full credit for correctly using the incorrect answer from the previous element. This response provides an incorrect process to modify the recipe, but correctly uses this incorrect process to find all the amounts of the ingredients needed in the recipe. After the initial error in understanding, the response shows correct follow-through for all the ingredients and receives credit for appropriate work and computations.

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

$$\frac{4}{8} + \frac{4}{8} + \frac{4}{8} + \frac{4}{8} + \frac{4}{8} + \frac{4}{8} = 3$$

$$\frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} = 20\frac{2}{8}$$

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

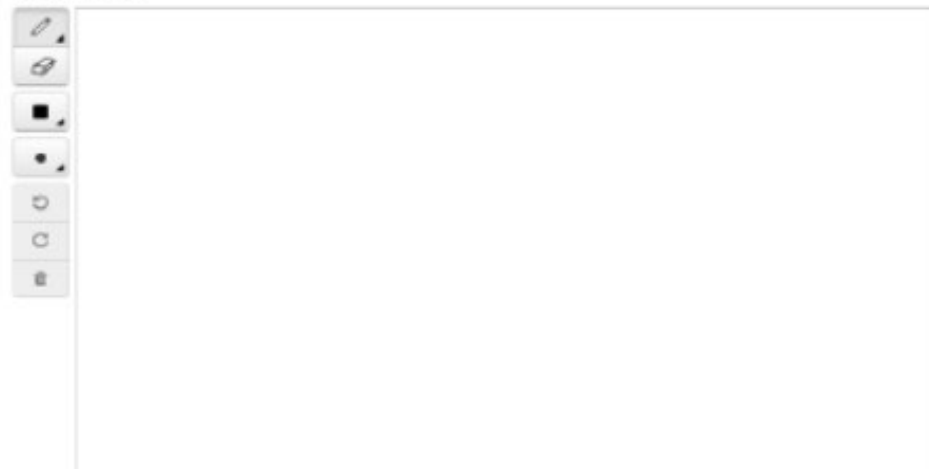
$$\frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} = 20\frac{2}{8}$$

$$\frac{7}{8} + \frac{7}{8} + \frac{7}{8} + \frac{7}{8} + \frac{7}{8} + \frac{7}{8} = 50\frac{2}{8}$$

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

I added every fraction six times.

Drawing Box



Anchor Paper 7

Part C: Score Point 2

This response receives partial credit. It includes two of the four required elements:

- A valid explanation of how to modify the recipe to make 30 servings is provided (I added every fraction six times). The work for all the ingredients clarifies the understanding that the recipe is adjusted by adding each fraction six times.
- A valid explanation or work to find the amount of sugar needed for 30 servings, including correct computation, is provided ($\frac{4}{8} + \frac{4}{8} + \frac{4}{8} + \frac{4}{8} + \frac{4}{8} + \frac{4}{8} = 3$). The amount of sugar needed for 5 servings ($\frac{4}{8}$) is added 6 times to find the correct amount of sugar for 30 servings (3 cups).

The response does not add the juices needed for 5 servings. Each juice is added 6 times individually. The response does not receive credit for this element unless the total amount of the orange and lemon juices for 30 servings are calculated. The computation for lemon juice is also incorrect.

The response does not add each amount of fruit needed for 5 servings. Each amount of fruit is added 6 times individually. The response does not receive credit for this element unless the total amount of fruit for 30 servings is calculated. The computation is also incorrect for blueberries and pineapple. The student response omits grapes.

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

$\frac{4}{8}$ cups of sugar

$\frac{5}{8}$ cups of juice in total.

$3\frac{3}{8}$ cups of fruit in total

He needs to add all that up.

$\frac{4}{8} + \frac{5}{8} + 3\frac{3}{8} = 4\frac{1}{2}$ cups for 5 servings.

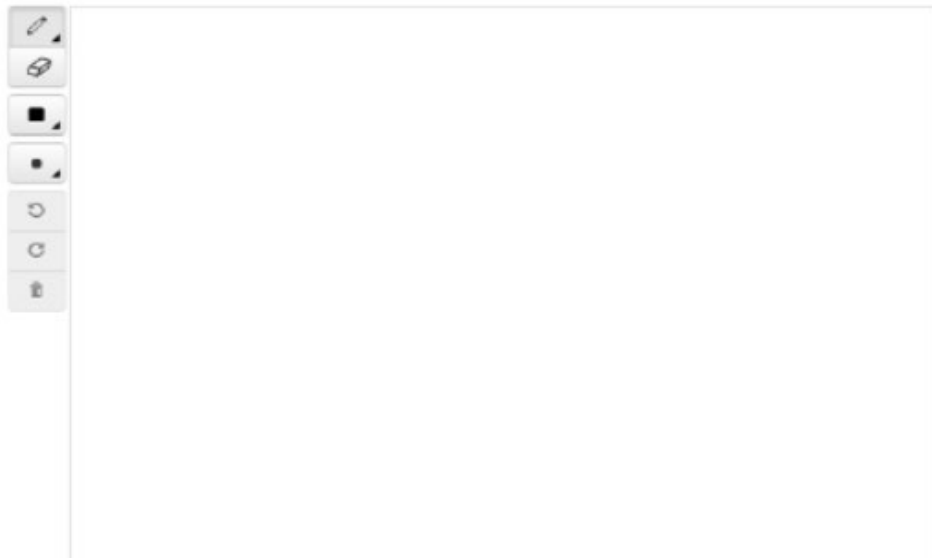
$4\frac{1}{2}$ cups $\times 6 = 27$

$\frac{4}{8} \times 6 = 24$ cups is the total amount of sugar for 30 servings.

$\frac{5}{8} \times 6 = 3\frac{3}{4}$ cups is the total amount of juice for 30 servings.

$3\frac{3}{8} \times 6 = 5\frac{1}{4}$ cups is the total amount of fruit for 30 servings.

Drawing Box



Anchor Paper 8

Part C: Score Point 2

This response receives partial credit. It includes two of the four required elements:

- A valid explanation of how to modify the recipe to make 30 servings is provided. The work for all the ingredients clarifies the understanding that the recipe is adjusted by multiplying by 6.

Note: No verbal explanation is included, but the understanding is clarified in the work since each ingredient is multiplied by 6.

- A valid explanation or work to find the total amount of juice needed for 30 servings, including correct computation, is provided ($\frac{5}{8} \times 6 = 3\frac{3}{4}$). The total amount of lemon juice and orange needed for 5 servings is multiplied by 6 to find the total amount of juice for 30 servings.

Although the explanation or work to find the total amount of sugar needed for 30 servings is shown ($\frac{4}{8} \times 6$), the computation is incorrect (24).

Although the explanation or work to find the total amount of fruit needed for 30 servings is shown ($3\frac{3}{8} \times 6$), the computation is incorrect ($5\frac{1}{4}$).

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

The amount that joey will need to make a 30 severving is 6x as much as regular because this regular can make 5 serveing and $5 \times 6 = 30$ to make a 30 seving he will need 3 cups of sugar, $2\frac{2}{8}$ cups of lemon and $1\frac{4}{8}$ cups of organge jucie.

Drawing Box

The drawing box contains a toolbar on the left with icons for erasing, drawing lines, shapes, and text. The main area contains handwritten work:

$$\frac{4}{8} \times 6$$
$$\frac{3}{8} \times 6$$
$$\frac{2}{8} \times 6$$

Anchor Paper 9**Part C: Score Point 2**

This response receives partial credit. It includes two of the four required elements:

- A valid explanation of how to modify the recipe to make 30 servings is provided. The student response shows understanding that the recipe is adjusted by multiplying by 6 (The amount that joey will need to make a 30 severving is 6x as much).
- A valid explanation or work to find the amount of sugar needed for 30 servings, including correct computation is provided (3 cups of sugar; $\frac{4}{8} \times 6$). The work is shown in the drawing box.

The response does not add the juices needed for 5 servings. Each juice is multiplied by 6 individually ($2\frac{2}{8}$ cups of lemon; $\frac{3}{8} \times 6$; $1\frac{4}{8}$ cups of organge; $\frac{2}{8} \times 6$). The response does not receive credit for this element unless the total of the orange and lemon juices for 30 servings are calculated.

The explanation or work to find the total amount of fruit needed for 30 servings is not shown.

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

Joey should multiply the recipes by 6 if he wants to make 30 servings because the recipe shows what he should add for 5 servings and 5 times 6 is 30.

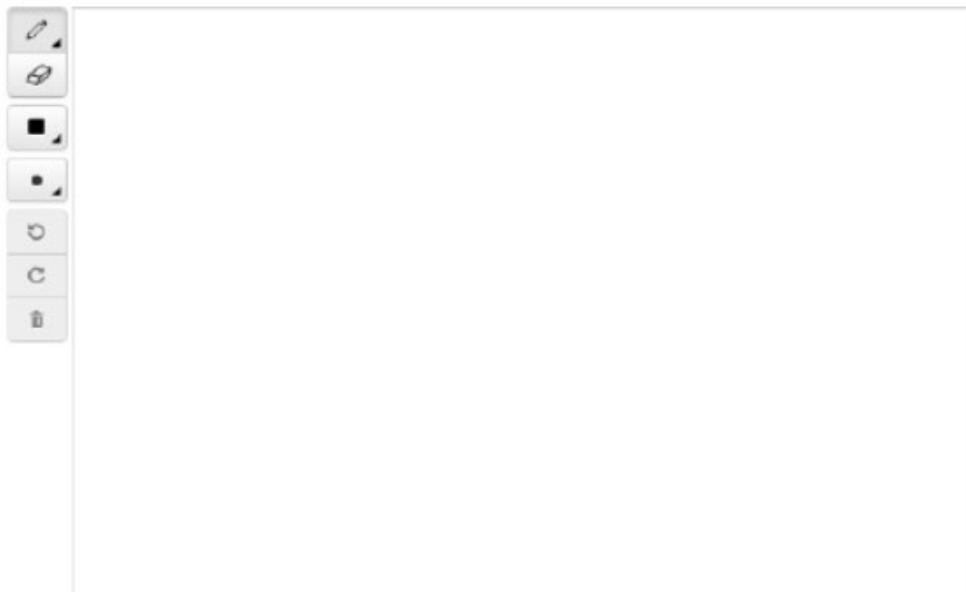
$$\text{Sugar: } \frac{4}{8} \times 6 = \frac{24}{8} = 3$$

$$\text{Juice: } \frac{3}{8} + \frac{2}{8} = \frac{5}{8} \times 6 = \frac{30}{8} = 3\frac{3}{8}$$

$$\text{Fruit: } \frac{3}{8} + 1 + \frac{7}{8} + 1\frac{1}{8} = 2\frac{11}{8} = 2\frac{3}{8}$$

$$\text{Total: } 3 + 3\frac{3}{8} + 2\frac{3}{8} = 8\frac{6}{8} = 8\frac{3}{4}$$

Drawing Box



Anchor Paper 10**Part C: Score Point 1**

This response receives partial credit. It includes one of the four required elements:

- A valid explanation of how to modify the recipe to make 30 servings is provided. The student response shows understanding that the recipe is adjusted by multiplying by 6 (Joey should multiply the recipes by 6).

Although the explanation or work to find the total amount of sugar needed for 30 servings is shown ($\frac{4}{8} \times 6$), the computation is incorrect ($\frac{24}{48}$). The student response shows multiplying 6 to the numerator and the denominator.

Although the explanation or work to find the total amount of juice needed for 30 servings is shown ($\frac{5}{8} \times 6$), the computation is incorrect ($\frac{30}{48}$). The student response shows multiplying 6 to the numerator and the denominator.

The explanation or work to find the total amount of fruit needed for 30 servings is incomplete. All the fruit amounts are added together but the total is not multiplied by 6.

Part C

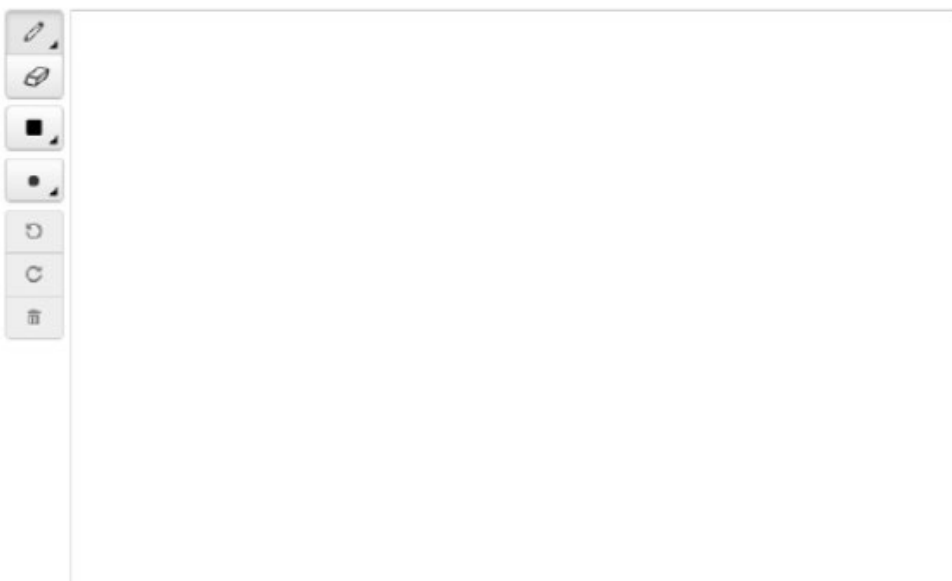
Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

$$\frac{4}{8} + \frac{5}{8} + 2 + \frac{11}{8} = 4\frac{4}{8}$$
$$4\frac{4}{8} \times 6 = 27$$

Drawing Box



Anchor Paper 11

Part C: Score Point 1

This response receives partial credit. It includes one of the four required elements:

- A valid explanation of how to modify the recipe to make 30 servings is provided. The student response shows understanding that the recipe is adjusted by multiplying by 6. The student response shows adding the amount of sugar to the amounts of juices and fruit and then multiplies the total by 6 to adjust the recipe for 30 servings ($\frac{4}{8} + \frac{5}{8} + 2 + \frac{11}{8} = 4\frac{4}{8}$; $4\frac{4}{8} \times 6 = 27$).

The response does not receive credit for other elements since the total amount for each ingredient is not computed separately.

Part C

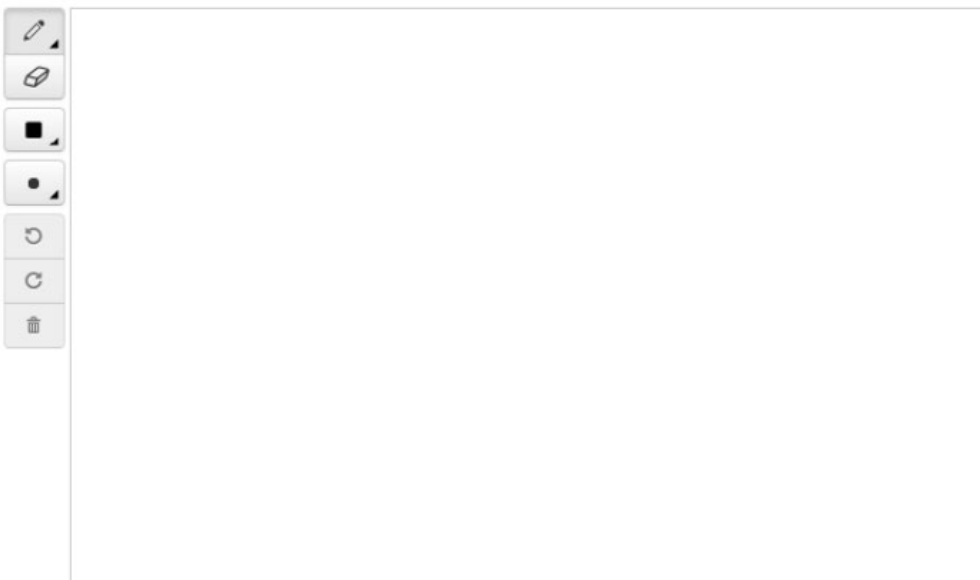
Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

She should do what she does for 5 servings but she should do it 6 times bigger because $6 \times 5 = 30$.

Drawing Box



A drawing box with a toolbar on the left side. The toolbar contains icons for: a pencil, an eraser, a square, a circle, a refresh/clear icon, a circular arrow, and a trash can. The main area of the drawing box is empty.

Annotation

Anchor Paper 12

Part C: Score Point 1

This response receives partial credit. It includes one of the four required elements:

- A valid explanation of how to modify the recipe to make 30 servings is provided. The student response shows understanding that the recipe is adjusted by multiplying by 6 (she should do it 6 times bigger).

The explanation or work to find the total amount for each set of ingredients is not provided.

Part C

Joey wants to make enough fruit salad for 30 servings.

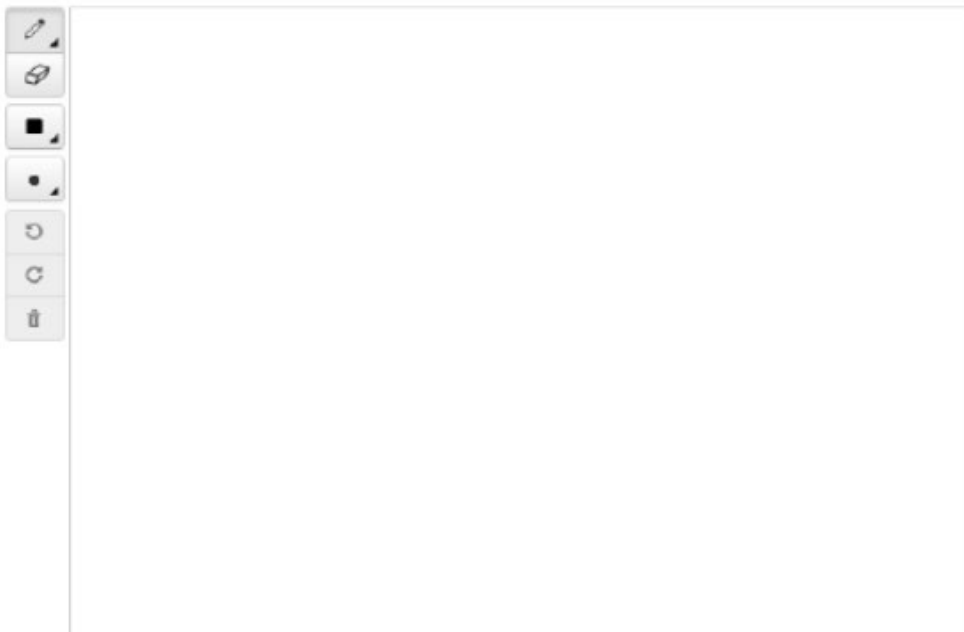
- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings adding all of the ingredients together.

$$\frac{4}{8} + \frac{3}{8} + \frac{2}{8} + \frac{3}{8} + 1 + \frac{7}{8} + 1\frac{1}{8} = 4\frac{1}{2}$$

Drawing Box



Anchor Paper 13**Part C: Score Point 0**

This response receives no credit. It includes none of the four required elements.

The explanation of how to modify the recipe to make 30 servings is not provided. The student response shows adding the ingredients together to find the total amount for 5 servings but does not multiply by 6 to adjust the recipe for 30 servings ($\frac{4}{8} + \frac{3}{8} + \frac{2}{8} + \frac{3}{8} + 1 + \frac{7}{8} + 1\frac{1}{8} = 4\frac{1}{2}$).

The explanation or work to find the total amount for each set of ingredients is not provided.

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

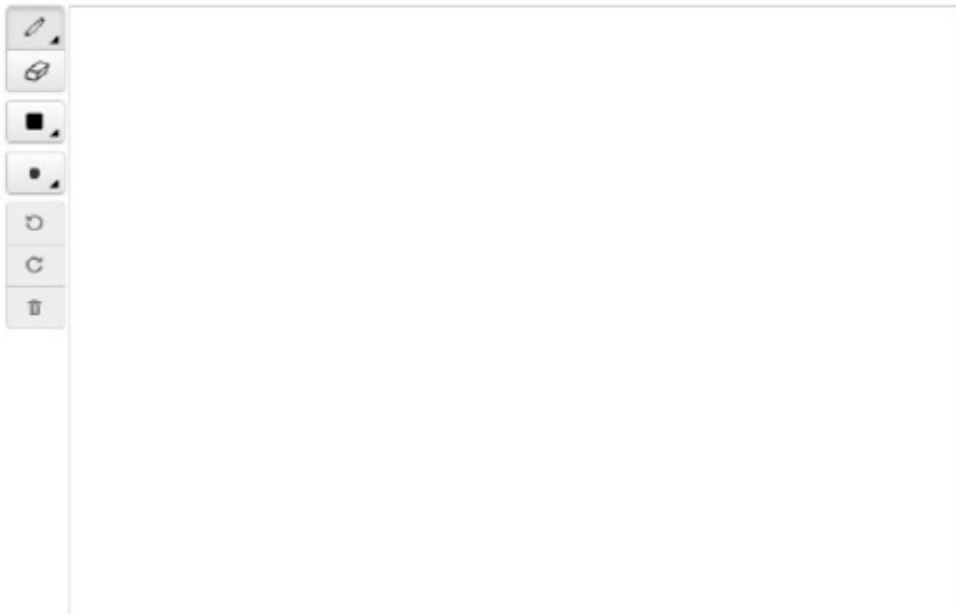
Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

So if we wanted 30 servings we need to add the things in the salad 3 times so.

$$\frac{4}{8} + \frac{4}{8} + \frac{4}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{2}{8} + \frac{2}{8} + \frac{2}{8} = 3\frac{6}{8} \text{ sugar juice.}$$
$$\frac{3}{8} + \frac{3}{8} + \frac{3}{8} + 1 + 1 + 1 + \frac{7}{8} + \frac{7}{8} + \frac{7}{8} + 1\frac{1}{8} + 1\frac{1}{8} + 1\frac{1}{8} = 9\frac{4}{8}$$

Fruits

Drawing Box



Anchor Paper 14

Part C: Score Point 0

This response receives no credit. It includes none of the four required elements.

The explanation of how to modify the recipe to make 30 servings is incorrect. The student response indicates misunderstanding that 30 servings would need 3 times more ingredients instead of 6 (we need to add the things in the salad 3 times).

The student response shows correct follow-through of the error by adding sugar and juices 3 times. However, sugar and juices are clumped together. Therefore, the response does not receive credit for amount of sugar or juice ($\frac{4}{8} + \frac{4}{8} + \frac{4}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{2}{8} + \frac{2}{8} + \frac{2}{8} = 3 \frac{6}{8}$).

Although the student response shows appropriate work for finding amounts of fruit based on the error for element 1 in the work by adding each type of fruit 3 times, the computation is incorrect ($\frac{3}{8} + \frac{3}{8} + \frac{3}{8} + 1 + 1 + 1 + \frac{7}{8} + \frac{7}{8} + \frac{7}{8} + 1\frac{1}{8} + 1\frac{1}{8} + 1\frac{1}{8} = 9\frac{4}{8}$). The appropriate follow-through computation would be $10\frac{1}{8}$, not $= 9\frac{4}{8}$.

Note: A Scoring Decision exists when elements in the rubric are independent of each other. If a response makes an error in a previous element and uses the incorrect answer in the next element, the response can receive full credit for correctly using the incorrect answer from the previous element. This response provides an incorrect process to modify the recipe, but incorrectly uses this incorrect process to find all the amounts of the ingredients needed in the recipe. After the initial misunderstanding, the response shows an incorrect follow-through for all the ingredients, and therefore, does not receive credit for subsequent elements.

Contrast with Anchor Paper 6 which correctly follows through with an incorrect process and receives credit for correct calculations of the ingredients.

Part C

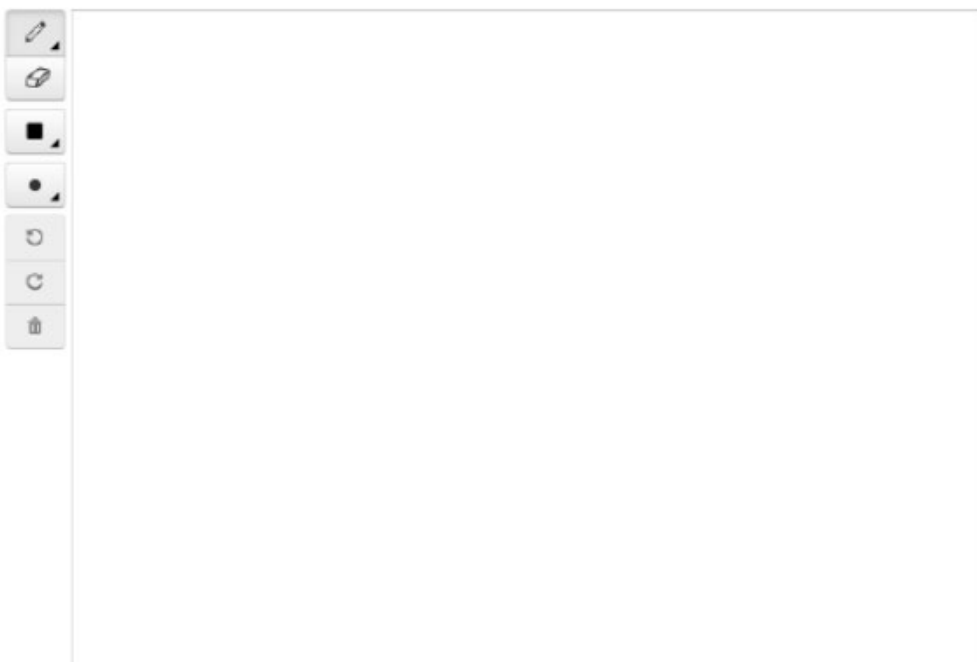
Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

$30 \times 5 = 150$ *servings*

Drawing Box



Annotation

Anchor Paper 15

Part C: Score Point 0

This response receives no credit. It includes none of the four required elements.

The explanation of how to modify the recipe to make 30 servings is not provided. The response incorrectly multiplies the 30 servings by 5 ($30 \times 5 = 150$ servings).

The explanation or work to find the total amount for each set of ingredients is not provided.

Practice Set 1
P1-1 – P1-10
Annotations Not Included

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

First off, we need to gather the total amount of sugar, juice, and fruit. When we add together all of our sugars we get $\frac{4}{8}$. When we add together all of our juice we get $\frac{5}{8}$. When we add together all of our fruit we get $\frac{11}{8}$. If it takes this amount to make five servings then we can count by fives to get to 30. But I am going to do it a other way.

$$\frac{4}{8} + \frac{4}{8} + \frac{4}{8} + \frac{4}{8} + \frac{4}{8} + \frac{4}{8} = \frac{24}{8}$$

$$\frac{5}{8} + \frac{5}{8} + \frac{5}{8} + \frac{5}{8} + \frac{5}{8} + \frac{5}{8} = \frac{30}{8}$$

$$\frac{11}{8} + \frac{11}{8} + \frac{11}{8} + \frac{11}{8} + \frac{11}{8} + \frac{11}{8} = \frac{66}{8}$$

Joey should times the total of all his sugar, juice, and fruit by 5

Drawing Box



Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

The recipe makes 5 servings so you could multiply that stuff by 6 to get 30 servings for joey. So he would need 3 cups of brown sugar. Then he would need $2\frac{2}{8}$ cups of lemon juice then he would need $1\frac{4}{8}$ cups of orange juice. The fruit will need to be multiplied by 6 to. So he would need $2\frac{2}{8}$ cups of blueberries, he would need 6 cups of grapes, he would need $5\frac{2}{8}$ cups of pineapples, then he would need $6\frac{6}{8}$ cups of strawberries.

Drawing Box

Handwritten work in the drawing box:

- A fraction $\frac{4}{8} \times \frac{6}{1}$ with a large 'X' over it, indicating it is cancelled.
- A fraction $\frac{24}{8}$.
- The word "repeat" written in cursive.
- A long division problem: $8 \overline{)24}$ with a horizontal line under the 24 and a 0 below it. To the right of the 24, the number "3 cups" is written, with the "3" circled.

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

$$\frac{4}{8} \times 30 = 16\frac{2}{8} S$$

$$\frac{3}{8} \times 30 = 11\frac{2}{8}$$

$$\frac{2}{8} \times 30 = 7\frac{4}{8}$$

joey will need $16\frac{2}{8}$ sugar and $18\frac{6}{8}$ juice

Drawing Box



Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

He should have 6 times the amount of each ingredient, because since 30 is 6 times greater than 5, which is how much the recipe makes, he should have x6 of every ingredient.

$$\frac{4}{8} \times 6 = 3$$

$$\frac{3}{8} + \frac{2}{8} = \frac{5}{8} \cdot \frac{6}{1} = 3\frac{3}{4}$$

$$\frac{3}{8} + 1 + \frac{7}{8} + \frac{9}{8} = 3\frac{3}{8} = \frac{27}{8} \cdot \frac{6}{1} = 20\frac{1}{4}$$

He will need 3 cups of sugar, $3\frac{3}{4}$ cups of juice, and $20\frac{1}{4}$ cups of fruit.

Drawing Box



Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

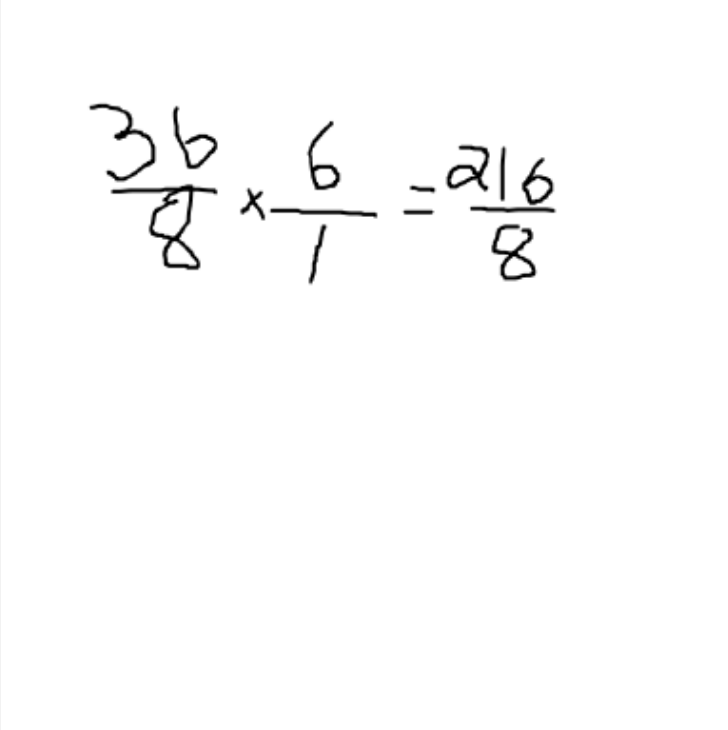
Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

Joey should adjust the recipe by multiplying each ingredient by 6. This will give Joey enough ingredients to make 30 servings of the fruit salad.

$$\frac{36}{8} \times \frac{6}{1} = \frac{216}{8} = 27 \text{ total amount of ingredients.}$$

3 cups of brown sugar, $3\frac{6}{8}$ cups of juice, and $3\frac{3}{8}$ cups of fruit.

Drawing Box



The drawing box contains a handwritten equation: $\frac{36}{8} \times \frac{6}{1} = \frac{216}{8}$. To the left of the equation is a vertical toolbar with icons for erasing, drawing lines, shapes, and text.

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

First add the juice wich is $\frac{3}{8} + \frac{2}{8} = \frac{5}{8}$ Next you must add the suger to the total of the juice $\frac{5}{8} + \frac{4}{8} = \frac{9}{8}$ Then you must add the fruit seperate this into 2 steps $\frac{3}{8} + \frac{8}{8} = \frac{11}{8}$ then $\frac{7}{8} + \frac{9}{8} = \frac{16}{8}$ then $\frac{11}{8} + \frac{16}{8} = \frac{27}{8}$ after that add all of the totals $\frac{5}{8} + \frac{9}{8} + \frac{27}{8} = \frac{41}{8}$ then since that makes five servings you must multiply your total by 6 because $5 \times 6 = 30$

$\frac{41}{8} \times 6 = \frac{246}{8}$ then divide by $\frac{246}{8} \div 8 = 30.56$ that is the answer

Drawing Box



Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

What joe will have to do is multiple every ingredient by 30.

Sugar He will need 15 cups

Juice He will need $18\frac{3}{4}$

Fruit he will need $40\frac{1}{2}$

Drawing Box

A drawing box with a toolbar on the left side. The toolbar contains the following icons from top to bottom: a pencil, an eraser, a black square fill icon, a white square fill icon, a lasso selection tool, a circular zoom-in icon, a circular zoom-out icon, and a refresh/reset icon.

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

Joe wants to make a fruit salad with 30 servings. His recipe is already five servings so you need to multiply each ingredient by 6 to find the total amount of ingredients for each recipe. Once I did the following step, I got a total of 3 cups of brown sugar, $2\frac{1}{4}$ cups of lemon juice, $1\frac{1}{2}$ cups of orange juice, $2\frac{1}{4}$ cups of blueberries, 6 cups of grapes, $5\frac{1}{4}$ cups of pineapple, and $6\frac{3}{4}$ cups of strawberries.

Drawing Box

Handwritten work in the drawing box:

$$\begin{array}{r} 4 \\ \hline 8 \end{array} \times \frac{6}{1}$$

$$\begin{array}{r} 1 \\ \hline 8 \end{array} \times \frac{6}{1}$$

$$2\frac{1}{8} \times \frac{6}{1}$$

$$2\frac{1}{2} \times \frac{6}{1}$$

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

First take $\frac{5}{8} + \frac{5}{8} + \frac{5}{8} + \frac{5}{8} + \frac{5}{8} + \frac{5}{8} = \frac{30}{8} = 3\frac{6}{8}$
 cups of juice.

Take $\frac{4}{8} + \frac{4}{8} + \frac{4}{8} + \frac{4}{8} + \frac{4}{8} + \frac{4}{8} = \frac{24}{8} = 3$ cups of brown sugar.

$\frac{27}{8} + \frac{27}{8} + \frac{27}{8} + \frac{27}{8} + \frac{27}{8} + \frac{27}{8} = \frac{162}{8} = 20\frac{2}{8} = 20\frac{1}{4}$ cups of fruit.

Drawing Box

Part C

Joey wants to make enough fruit salad for 30 servings.

- How should Joey adjust the recipe to find the total amounts of sugar, juice, and fruit needed for 30 servings? Explain your answer.
- What is the total amount of sugar, the total amount of juice, and the total amount of fruit needed for 30 servings? Show your work.

Enter your answers, your explanation, and your work in the space provided. You may use the drawing box to add a drawing to help explain your answer and support your explanations.

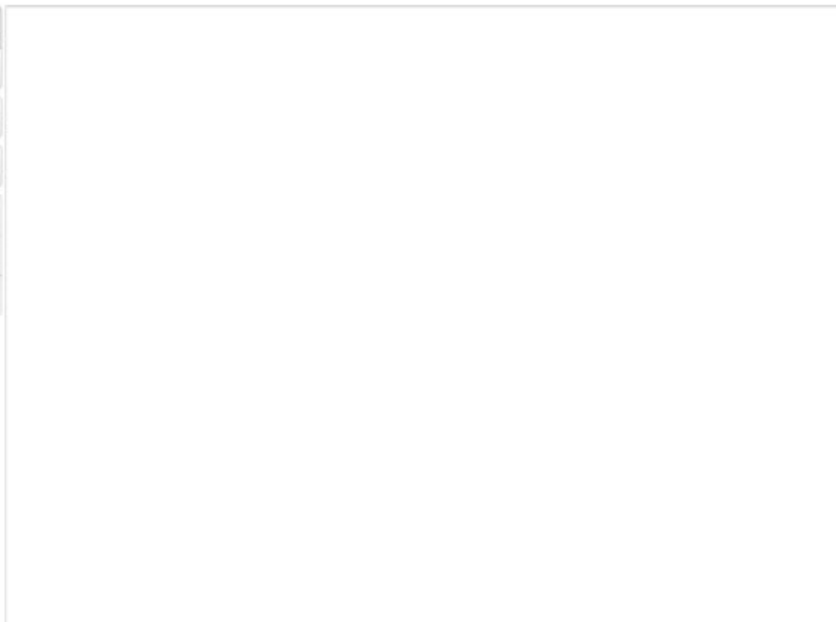
Joey would multiply everything by 6 since the original recipe only has 5 servings $6 \times 5 = 30$

brown sugar: 3 cups of brown sugar work: $\frac{4}{8} \times 6 = 3$

juice: $3\frac{6}{8}$ of juice work: $\frac{3}{8} \times 6 = 2\frac{2}{8}$ then I did $\frac{2}{8} \times 6 = 1\frac{4}{8}$
then i did $2\frac{2}{8} + 1\frac{4}{8} = 3\frac{6}{8}$

fruit: $22\frac{2}{8}$ my work: $6 + 2\frac{2}{8} + 7\frac{3}{8} + 6\frac{6}{8} = 22\frac{2}{8}$

Drawing Box



Practice Set Paper	Score
P1-1	3
P1-2	2
P1-3	1
P1-4	3
P1-5	3
P1-6	1
P1-7	2
P1-8	2
P1-9	4
P1-10	3