Compare two unlike fractions by making denominators same and subtraction of unlike fractions.

CCSS.MATH.CONTENT.6.RP.A.2 | G5M5C26

Vaniloco sows cocoa beans on her farm with your help. After a few days, she is ready to harvest her produce. Since harvesting of cocoa beans is a delicate process, Vaniloco hires expert labourers for the harvest season.

1 Two different experts tell Vaniloco about the fraction of good quality cocoa beans. Compare the given fractions and fill the box with '>', '<' or '='.

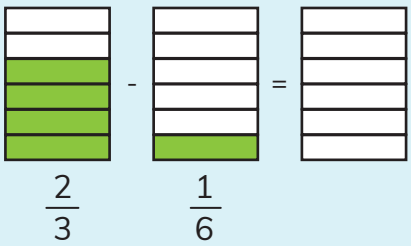
$\frac{4}{5}$ ☐ $\frac{3}{10}$

2 Subtract the following fractions. Write the correct answer in the boxes given below.

$\frac{5}{7} - \frac{2}{14} = \frac{\square}{\square\ \square}$

3 Subtract the fractions using the given visual model and reduce the answer to the simplest form. Write the correct answer in the boxes given below.

$\frac{2}{3} - \frac{1}{6} = \frac{\square}{\square}$



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4 Subtract the given mixed fractions. Use the guides to write the correct answers in the boxes given below.

$5\frac{4}{5} - 3\frac{1}{3}$

$\square - \square$ = $\frac{\square}{\square} - \frac{\square}{\square}$ = $\square \frac{\square}{\square\square}$

Whole Part | Fraction Part | Mixed Fraction

5 Find where the first error occurred and tick ✓ the correct box.

$\frac{11}{3} - \frac{13}{4}$

☐ Step 1: $\frac{(11 \times 4)}{(3 \times 4)} - \frac{(13 \times 3)}{(4 \times 3)}$

☐ Step 2: $\frac{44}{12} - \frac{39}{12}$

☐ Step 3: $\frac{(44 - 12)}{(12 - 12)}$

☐ Step 4: $\frac{5}{0}$

6 For every 10 rows of cocoa bean plants, you assign 2 labourers. Find the ratio of the number of labourers to the number of rows of the cocoa bean plants. Change the fractions into the simplest forms. Write your answers in the boxes given below.

Hint: $\frac{2}{7}$ can be written as 2:7

$\frac{\square}{\square\square} = \frac{\square}{\square}$ $\square : \square$

Fraction

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The harvesting of cocoa beans continues for a week. Now, after the harvesting is done, Vaniloco has another big challenge ahead of her, that is, storing the harvested cocoa beans in jute bags without damaging the beans. Rats or excess moisture in the storeroom can damage the beans.

1 Vaniloco packs the beans into two different boxes and stores them in her warehouse which has an area of $\frac{21}{4}$ sq. units. Box A occupies $\frac{5}{4}$ sq. units and Box B occupies $\frac{3}{7}$ sq. units. Calculate the area which remains unoccupied. Write your answers in the boxes given below.

Total area (Warehouse) = Box A + Box B + unoccupied area

$\frac{\square\square}{\square}$ = $\frac{\square}{\square}$ + $\frac{\square}{\square}$ + unoccupied area

Unoccupied area = $\frac{\square\square}{\square}$ sq. units

2 Box A has 25 bags. The total number of bags in both Box A and Box B is 90. What is the ratio of the bags in Box A to Box B? Write your answers in the boxes given below.

$\frac{\square\square}{\square\square}$ = $\frac{\square}{\square\square}$

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3 The warehouse consists of a moisture-regulating nozzle. If you have $\frac{11}{3}$ L of liquid moisture in the tank and you supply $\frac{5}{6}$ L of moisture over the bags in Box A and $\frac{5}{7}$ L of moisture over the bags in Box B, then find the amount of liquid moisture left in the tank. Write your answers in the boxes given below.

Total moisture in the tank = $\frac{\square\square}{\square}$ L

Moisture over Box A = $\frac{\square}{\square}$ L

Moisture over Box B = $\frac{\square}{\square}$ L

Total moisture spread over boxes A and B = $\frac{\square\square}{\square\square}$ L

Amount of moisture left in the tank = $\frac{\square\square}{\square\square}$ L

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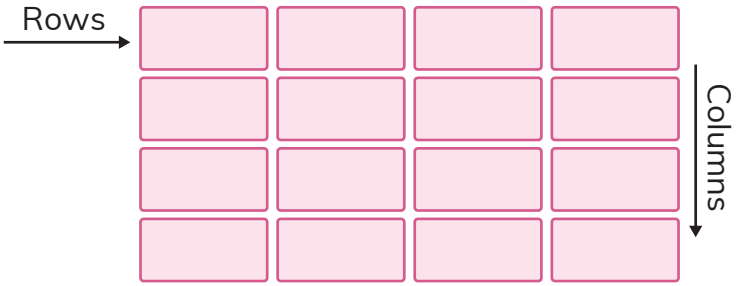
The labourers successfully accomplish the harvesting and storing of cocoa bean bags. But one night, the rats attack the cocoa bean bags.

1

Structural aspects of the warehouse:
- The warehouse area is divided into two parts: Box A and Box B.
- Box A is divided into 4 rows and 4 columns.
- Box B is divided into 5 rows and 5 columns.

Let's take a look at the warehouse area of Box A and identify the damages caused by the rats.

Analysis:
- Each of the boxes (on the right) represents a bag in the warehouse.
- Some of the bags were damaged. Select the damaged bags by colouring the boxes.
- You can select any bags but, they have to be less than 7 in number.



Warehouse Area Category A

Depending on the number of boxes attacked, find out the number of undamaged boxes. Write your answers in the boxes given below.

Number of boxes attacked = $\frac{\square}{\square\ \square}$

Number of undamaged boxes = $\frac{16}{16} - \frac{\square}{\square\ \square} = \frac{\square\ \square}{\square\ \square}$

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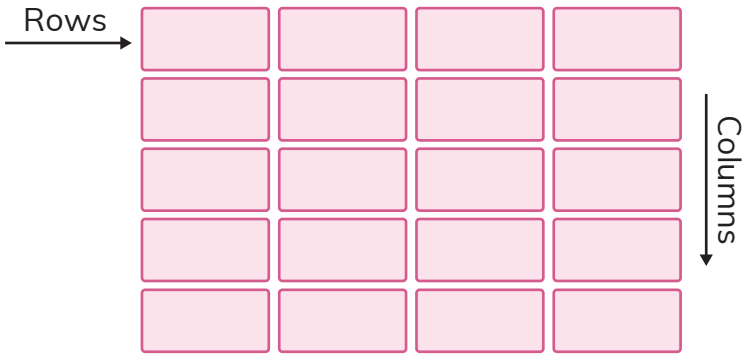
After the analysis of bags in Box A, let us take a look at the warehouse area of Box B and observe the damage caused. Here too, we will follow the same procedure that we followed for Box A.

Analysis:

- Each of the boxes in the figure (on the right) represents a bag in the warehouse.
- Some of the bags were damaged. Select the damaged bags by colouring the boxes.
- You can select any bags but they have to be less than 9 in number.



Warehouse Area Category B

Depending on the number of boxes attacked, find out the number of undamaged boxes. Write your answers in the boxes given below.

Number of boxes attacked = $\frac{\square}{\square\ \square}$

Number of undamaged boxes = $\frac{25}{25} - \frac{\square}{\square\ \square} = \frac{\square\ \square}{\square\ \square}$

Congratulations! You were able to save several boxes!