Name: .... Class: ....

Add and subtract mixed numbers with unlike denominators word problems

1. Mr. Johnson and Mr. Lyon share a boundary with the fruits orchards they own. Last week, Mr. Johnson harvested 15 $\frac{1}{4}$ kg of apples and Mr. Lyon harvested 15 $\frac{1}{2}$ kg of apples. How many more grams did Mr. Lyon harvest than Mr. Johnson?

2. In the process of making berry punch, Lily mixed 7 $\frac{1}{2}$ cups blueberry juice and 1 $\frac{3}{8}$ cup cranberry juice together. How many quarts of berry punch did she make?

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1. Mr. Johnson and Mr. Lyon share a boundary with the fruits orchards they own. Last week, Mr. Johnson harvested $15\frac{1}{4}$ kg of apples and Mr. Lyon harvested $15\frac{1}{2}$ kg of apples. How many more grams did Mr. Lyon harvest than Mr. Johnson?

Let's write down the given information.

Quantity of apples Mr. Johnson harvested = $15\frac{1}{4}$

Quantity of apples Mr. Lyon harvestd = $15\frac{1}{2}$

So, quantity Mr. lyon harvested more than Mr Johnson = $15\frac{1}{2} - 15\frac{1}{4}$

$15\frac{1}{2} - 15\frac{1}{4}$

$(15-15)\ \dfrac{2 - 1}{4} = \frac{1}{4}$ kg

But we know that,

1 kg = 1000g

So, $\frac{1}{4}$ kg = $1000 \times \frac{1}{4}$ g $= \frac{1000}{4}$ g = 250g.

Therefore, Mr. Lyon harvested 250 more grams of apples than Mr. Johnson.

2. In the process of making berry punch, Lily mixed $7\frac{1}{2}$ cups blueberry juice and $1\frac{3}{8}$ cup cranberry juice together. How many quarts of berry punch did she make?

Let's write down the given information.

Amount of bleuberry juice mixed = $7\frac{1}{2}$

Amount of cranberry juice mixed = $1\frac{3}{8}$

So, amount mixed altogether = $7\frac{1}{2} + 1\frac{3}{8}$

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

$(7+1)\ \dfrac{4 + 3}{4} = 8\frac{7}{8}$ cups

But we know that,

4 cups = 1 quarts

So, $8\frac{7}{8}$ cups $= \dfrac{(8 \times 8) + 7}{8} \div \frac{4}{1}$ quarts

$= \frac{71}{8} \times \frac{1}{4}$ quarts $= \frac{71}{32}$ quarts

$= 2\frac{7}{32}$ quarts

So, Lily made $2\frac{7}{32}$ quarts or 2 quarts $\frac{7}{32}$ cups of berry punch.