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

Multiply fractions by whole numbers: word problems

a. Peter spent $\frac{2}{3}$ of an hour for 5 days preparing for his final year Mathematics exams. Jerry, his brother spent $\frac{3}{4}$ of an hour for 4 days preparing for the same exams. Who spent more time preparing for his exams?

b. Mr. Williams harvests $\frac{3}{4}$ kg of apples from his farm every day. How many grams of apples will he harvest in 3 weeks? Simplify your answer.

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Multiply fractions by whole numbers: word problems

a. Peter spent $\frac{2}{3}$ of an hour for 5 days preparing for his final year Mathematics exams. Jerry, his brother spent $\frac{3}{4}$ of an hour for 4 days preparing for the same exams. Who spent more time preparing for his exams?

Let's first of all write down the information given.

Time Peter spent preparing for the exams each day = $\frac{2}{3}$ of an hour.

Number of days Peter used in preparing for the exams = 5 days

So total time he spent preparing for the exams for 5 days = $(\frac{2}{3} \times 5) = \frac{10}{3} = 3\frac{1}{3}$ hours

Time Peter spent preparing for the exams each day = $\frac{3}{4}$ of an hour.

Number of days Peter used in preparing for the exams = 4 days

So total time he spent preparing for the exams for 5 days = $(\frac{3}{4} \times 4) = \frac{12}{4} = 3$ hours

Now, let's compare to find out who spent more time in preparing for the exams.

You see that, $3\frac{1}{3}$ hours > 3 hours

So, Peter spent more time preparing for the exams than Jerry.

b. Mr. Williams harvests $\frac{3}{4}$ kg of apples from his farm every day. How many grams of apples will he harvest in 3 weeks? Simplify your answer.

Let's first of all write down the information given.

Quantity of apples he harvested in a day = $\frac{3}{4}$ kg

Time given = 3 weeks

But we know that 1 week = 7 days

So 3 weeks = (3 x 7) days = 21 days

So, quantity of apples he will harvest in 3 weeks = $(\frac{3}{4} \times 21)$ kg = $\frac{63}{4}$ kg

But we know that, 1 kg = 1000g

So $\frac{63}{4}$ = $(1000 \times \frac{63}{4})$ g = $\frac{1000 \times 63}{4}$ = 15,750 grams

Therefore, Mr. Williams will harvest 15,750 grams of apples in 3 weeks.