Name: _____   Date: _____

Problem Sum Worksheet

Topic : Fractions

Video Solution: https://www.omyclassroom.com/fraction.html

Topic 1: Branching method - Qn 1 (Difficulty: High)

A group of pupils learnt to play musical instruments during Passion Pursuit. $\frac{2}{5}$ of them learnt to play the guitar. $\frac{1}{4}$ of the rest of the pupils learnt to play the drum. All the remaining pupils learnt to play the recorder. A total of 255 pupils learnt to play the guitar and the recorder.

(a) What fraction of the group of pupils learnt to play the recorder?
(b) How many pupils were there in the group?

Topic 1: Branching method - Qn 2 (Difficulty: Low)

In a class, $\frac{3}{5}$ of the pupils are girls. $\frac{1}{6}$ of the girls and $\frac{3}{4}$ of the boys wear spectacles. What fraction of the pupils wear spectacles? Express your answer in its simplest form.

Topic 2: Different fraction same amount - Qn 1 (Difficulty: Medium)

$\frac{1}{3}$ of the length of Ribbon X is equal to $\frac{3}{5}$ the length of Ribbon Y. Ribbon X is 240 cm longer than Ribbon Y. Find the total length of Ribbon X and Y.

Topic 2: Different fraction same amount - Qn 2 (Difficulty: Medium)

$\frac{1}{3}$ of John's money is equal to $\frac{4}{5}$ of David's money. John has $392 more than David. How much money do they have altogether?

Topic 3: Fraction and fraction of - Qn 1 (Difficulty: Low)

James had 4 litres of water. He drank $\frac{2}{5}$ litres of water in the morning and $\frac{7}{8}$ litres of water in the afternoon. How much water had he left? Give your answer in litres.

Topic 3: Fraction and fraction of - Qn 2 (Difficulty: Medium)

Mrs Lim bought 10 ℓ of milk. She drank $\frac{5}{8}$ ℓ of it. She used $\frac{1}{3}$ of the remaining milk to make yoghurt.

(a) How much milk was left after Mrs Lim drank some of it?

(b) How much milk was left in the end?
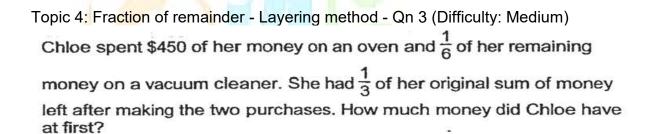
Give your answers in the simplest form.

Topic 3: Fraction and fraction of - Qn 3 (Difficulty: Medium)

Kelvin mixed $1\frac{1}{2}$ ℓ of red paint with $4\frac{1}{3}$ ℓ of yellow paint to make a mixture of

orange paint. After he accidentally spilt $\frac{1}{5}$ of the orange paint, he used the

remaining orange paint to paint 7 stools. He used $\frac{1}{4}$ ℓ of orange paint for each

stool. How much orange paint was left in the end? Give your answer as a

mixed number in its simplest form.

Topic 4: Fraction of remainder - Layering method - Qn 1 (Difficulty: Medium)

$\frac{3}{11}$ of students in a school like Rugby, $\frac{1}{4}$ of the remaining students like Soccer

and the rest like Tennis. 348 more students like Tennis than Rugby. How

many students are there in the school altogether?

Topic 4: Fraction of remainder - Layering method - Qn 2 (Difficulty: Medium)

Davis saved $\frac{1}{7}$ of his salary and spent $\frac{5}{8}$ of the remainder on a television. He bought a camera with his remaining money. The camera cost $360. How much was his salary?

Topic 4: Fraction of remainder - Layering method - Qn 3 (Difficulty: Medium)

Chloe spent $450 of her money on an oven and $\frac{1}{6}$ of her remaining money on a vacuum cleaner. She had $\frac{1}{3}$ of her original sum of money left after making the two purchases. How much money did Chloe have at first?

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Topic 4: Fraction of remainder - Layering method - Qn 4 (Difficulty: High)

Jovan spent $\frac{1}{6}$ of his money and an additional $15 on a wallet. He spent $\frac{1}{4}$ of the remaining money and an additional $10 on a belt. He was left with $65. How much did he have at first?

Topic 4: Fraction of remainder - Layering method - Qn 5 (Difficulty: Medium)

A baker bought some eggs. She used $\frac{1}{3}$ of the eggs to bake tarts, 92 eggs to bake muffins and $\frac{2}{3}$ of the remaining eggs to bake cupcakes. After that, she still had 36 eggs. How many eggs did the baker buy?

Topic 4: Fraction of remainder - Layering method - Qn 6 (Difficulty: High)

A tailor spent $\frac{5}{9}$ of her money to buy 90 red buttons. She spent $\frac{7}{12}$ of the remaining money to buy blue buttons. She had $150 left. A red button cost twice as much as a blue button.

(a) What was the cost of the red buttons?

(b) What was the cost of one blue button?

Topic 4: Fraction of remainder - Layering method - Qn 7 (Difficulty: Low)

Keith bought some game cards. He gave $\frac{3}{5}$ of them to his brother and $\frac{1}{4}$ of the remainder to his cousin. After that, Keith had 54 game cards left. How many game cards did Keith buy?

Topic 4: Fraction of remainder - Layering method - Qn 8 (Difficulty: Medium)

Mr Tan made some fish balls. He sold $\frac{3}{4}$ of the fish balls in the morning and $\frac{1}{3}$ of the remaining fish balls in the afternoon. He made another 506 fish balls and had twice the number of fish balls he made at first. How many fish balls did he make at first?

Topic 4: Fraction of remainder - Layering method - Qn 9 (Difficulty: Medium)

George has some red, blue and green stickers. $\frac{4}{9}$ of the stickers are red. $\frac{2}{5}$ of the remaining stickers are blue and the rest are green. The number of green stickers is 36 fewer than the number of red stickers.

(a) What fraction of the stickers are green?

(b) How many stickers does George have?

Topic 4: Fraction of remainder - Layering method - Qn 10 (Difficulty: Medium)

In a chocolate shop, $\frac{3}{4}$ of the chocolates were white chocolates and the rest were dark chocolates. $\frac{1}{6}$ of the dark chocolates were sold. There were 75 pieces of dark chocolate left. How many pieces of chocolate were there in the shop at first?

Topic 4: Fraction of remainder - Layering method - Qn 11 (Difficulty: Medium)

Kim gave $\frac{1}{3}$ of her savings to her mother. She then bought some dresses for $177 and spent $129 on a pair of earrings. After that, she found that the amount of money left was $\frac{1}{2}$ of what she gave her mother. How much was her savings?

Topic 4: Fraction of remainder - Layering method - Qn 12 (Difficulty: High)

John had some stamps. He gave $\frac{1}{4}$ of his stamps to Sally and 10 stamps to Kate. He then gave $\frac{1}{2}$ of the remaining stamps to Joy and 5 stamps to Daisy. He had 50 stamps left.

(a) How many stamps did Joy receive?

(b) How many stamps did Sally receive?

(c) How many stamps did John have at first?

Topic 4: Fraction of remainder - Layering method - Qn 13 (Difficulty: Medium)

A drink stall owner sold $\frac{1}{9}$ of his canned drinks in the morning and $\frac{3}{4}$ of the remaining canned drinks in the afternoon. After he received a delivery of another 200 canned drinks, he found that he had 32 canned drinks more than what he had at first. How many canned drinks did the stall owner have at first?

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Topic 5: Fraction of the same object - Qn 1 (Difficulty: Medium)

A group of people went to the zoo. $\frac{1}{5}$ of them were adults, $\frac{1}{4}$ of them were girls and the rest were boys.

a) What was the ratio of the number of adults to the number of girls to the number of boys?

b) The number of adults was 96 fewer than the total number of girls and boys in the group. Find the total number of people in the group.

Topic 5: Fraction of the same object - Qn 2 (Difficulty: Medium)

Mrs Chong had some flour. She used $\frac{1}{5}$ of it to bake a cake and $\frac{2}{7}$ of it to make a pizza. She then gave her neighbour 950 g of flour. She was left with 850 g of flour. How much flour did Mrs Chong use to make a pizza? Give your answer in kilograms.

Topic 5: Fraction of the same object - Qn 3 (Difficulty: Medium)

There were some spectators watching a tennis match. $\frac{3}{4}$ of them were men and women. $\frac{5}{6}$ of them were men and children. 63 spectators were men.

(a) What fraction of the spectators were men ?

(b) How many spectators were there at the tennis match?

Topic 5: Fraction of the same object - Qn 4 (Difficulty: Medium)

Diana had 600 g of flour. She used $\frac{2}{3}$ of the flour to bake a cake and $\frac{1}{4}$ of the flour to bake a tart. How much flour did Diana use altogether?

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Topic 5: Fraction of the same object - Qn 5 (Difficulty: High)

Mrs Kwek bought a total of 576 red, blue and yellow buttons. $\frac{3}{4}$ of the buttons were red and blue buttons. $\frac{2}{3}$ of the buttons were blue and yellow buttons.

(a) What fraction of the buttons were red?

(b) Find the difference between the number of blue buttons and the number of yellow buttons.

Topic 5: Fraction of the same object - Qn 6 (Difficulty: Low)

A bakery made some cookies. $\frac{3}{4}$ of them were sold on Monday. $\frac{1}{3}$ of the remaining were sold on Tuesday. What fraction of the cookies was sold on Tuesday?

Topic 6: Simple Fraction addition and subtraction - Qn 1 (Difficulty: Low)

Clarice had some meat at first. She used $1\frac{1}{2}$ kg of it to make dumplings and bought another $3\frac{3}{4}$ kg of the same meat. She had $4\frac{1}{8}$ kg of meat in the end. How much meat did she have at first?

Topic 6: Simple Fraction addition and subtraction - Qn 2 (Difficulty: Low)

The masses of John, Gregory and Ethan are $38\frac{1}{5}$ kg, $41\frac{1}{3}$ kg and $52\frac{1}{4}$ kg respectively. Find the total mass of the 3 children. Give your answer as a mixed number in its simplest form.

Topic 6: Simple Fraction addition and subtraction - Qn 2 (Difficulty: Low)

The breadth of a rectangle is $\frac{37}{4}$ cm. Its length is $\frac{7}{2}$ cm longer than its breadth.

(a) What is the length of the rectangle? Express your answer as an improper fraction.

(b) What is the area of the rectangle? Express your answer as a mixed number in its simplest form.

Topic 6: Simple Fraction addition and subtraction - Qn 2 (Difficulty: Medium)

Mr Wang bought $2\frac{1}{4}$ kg of green beans and 3 times as much red beans as green beans. The cost of 1 kg of green beans was $4 and the cost of 1 kg of red beans was $5. What was the total amount of money Mr Wang spent on the green beans and red beans?

Topic 7 : Unit and fraction - Qn 1 (Difficulty: Low)

There were 648 adults at a stadium. $\frac{4}{9}$ of the adults were men. How many men were there at the stadium?