

## 4 Year 5 Term 2 Week 4 Homework

### 4.1 Topic 1 — Fractions and Quantities

1. If you multiply a fraction by 36 and add 9, the answer is 21. What is the fraction?

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2. Ray earned \$560 a week and saved  $\frac{3}{7}$  of it. How much did he spend each week?

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3. The same number is multiplied to both  $\frac{3}{18}$  and  $\frac{4}{27}$ . For the fractions to become whole numbers, find the smallest number.

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4. A train travels 210 km in  $3\frac{1}{3}$  hours. What is its speed?

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5. The sum of a denominator and a numerator is 136 and their difference is 24. What is the proper fraction in its simplest form?

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6. A bottle contains  $1\frac{1}{4}$  litres of milk and Ken drank  $\frac{3}{8}$  of it. How much was left?

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### 4.2 Topic 2 — Percentage of a Quantity

1. Charles has a pile of paper sheets. He used 8 sheets plus 40% of the pile, 40 sheets remain. How many sheets did Charles begin with?

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2. At King George Catholic School girls represent 3 more than 48% of the total students, and boys represent 15 less than 54% of the students. How many students are there in the school?

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3. I started with \$4.85. Even after I had tripled my money I only had 75% of what I needed. How much did I need?

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4. The rates on our house are \$14,280. This amounts to 35% of our combined incomes. Find the amount of money that we have after paying the rates.

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5. A worksheet has 45% of its questions on fractions, 12% on percentage, 15% on graphs and the rest on problem solving. What percentage of the questions are problem solving?

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### 4.3 Topic 3 — Shopping and Best Buy

1. A pair of shoes and a pair of socks cost \$65 together and the pair of shoes costs \$62 more than the pair of socks. Find the cost of one pair of socks.

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2. I spent 40% of my money on clothes and 60% of what I had left on food. That left me \$48. How much did I start with?

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3. The supermarket sells 16 peaches for \$12.50 and 18 mangoes for \$14.50. Which is the cheaper fruit?

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4. Potatoes are sold in different package sizes. 5kg for \$6.50, 10 kg for \$12.50 and \$1.35 per kg. Which is the best buy?

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5. Three type of pens are sold in a stationery shop. Which type is the cheapest?  
(A) \$4 for 3                      (B) \$8 for 5                      (C) \$10 for 8                      (D) \$1.28 each

### 4.4 Topic 4 — Using a Factor Tree (HCF and LCM)

1. Find the H.C.F of the following numbers:

(a) H.C.F (144 and 220) = \_\_\_\_\_

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(b) H.C.F (15, 45 and 50) = \_\_\_\_\_

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(c) H.C.F (16, 48 and 64) = \_\_\_\_\_

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(d) H.C.F (400 and 480) = \_\_\_\_\_

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(e) H.C.F (240 and 504) = \_\_\_\_\_

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2. Find the L.C.M of the following numbers:

(a) L.C.M (150 and 240) = \_\_\_\_\_

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(b) L.C.M (544 and 595) = \_\_\_\_\_

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(c) L.C.M (144 and 220) = \_\_\_\_\_

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(d) L.C.M (396 and 360) = \_\_\_\_\_

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(e) L.C.M (440 and 480) = \_\_\_\_\_

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### 4.5 Problem Solving involving L.C.M

1. Four girls shared evenly among themselves a number of sweets. There were none left over. Another two girls joined in so they shared the sweets evenly among six girls. Once again there were none left over. Find the minimum number of sweets that could make this possible.

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2. When a certain number of marbles are to be shared between 3 children there are 2 marbles left over. When these marbles are shared with four children, there are 2 marbles left over. When the same number of marbles are shared with five children, there are 2 marbles left over again. Find the smallest number of marbles that could have been available.

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3. 15 children at a party share out the jelly beans between them evenly. There was one jelly bean left over. Three children left early and did not take their jelly beans. All the jelly beans had to be shared evenly between the remaining children, again there was one jelly bean left over. Find the least number of jelly beans that could possibly have been there?

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4. A box contains a certain number of marbles. The marbles can be divided into equal shares among 6, 7, or 8 children with 2 marbles left over each time. What is the least number of marbles in the box?

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**4.6 Test Paper 4****4.6.1 Part A — 10 Multiple Choice Questions (1 mark each)**

1. What number must be placed in the box to give a 4 digit number which is divisible by 3 and 7?

$$1 \boxed{?} 76$$

- (A) 1                      (B) 2                      (C) 3                      (D) 4

2. Find the sum of  $0 + 3 + 6 + 9 + \dots + 27 + 30$ .

- (A) 145                      (B) 165                      (C) 162                      (D) 166

3. Find the missing number: 3, 10, 31, 94,  $\boxed{?}$

- (A) 102                      (B) 162                      (C) 212                      (D) 283

4.  $\frac{1}{5000}$  km =  $\boxed{?}$  cm .

- (A) 0.2                      (B) 50                      (C) 200                      (D) 20

5. If a map scale is 5 mm to 8 m, what length does a line 5.5 cm long represent in real distance?

- (A) 88 m                      (B) 800 m                      (C) 880 m                      (D) 44 m

6. 5000 ml =  $\boxed{?}$  Litres.

- (A) 0.5                      (B) 5                      (C) 50                      (D) 500

7. 7.8 Litres =  $\boxed{?}$   $cm^3$

- (A) 7.8                      (B) 78                      (C) 780                      (D) 7800

8.  $\frac{1}{3}$  m/second =  $\boxed{?}$  m/minute.

- (A) 120                      (B) 60                      (C) 20                      (D) 30

9. 60 km per hour =  $\boxed{?}$  m/minute.

- (A) 600                      (B) 1200                      (C) 1000                      (D) 360

10. 18 out of 60 is  $\boxed{?}$  %

- (A) 30                      (B) 36                      (C) 0.3                      (D) 10.8

**4.6.2 Part B — 10 Average Questions (2 marks each)**

1. Find the sum of all the prime numbers from 20 to 50.

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2. If 9 notebooks cost \$12.33, what is the cost of 5 notebooks?

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3. From today the bus fare will rise by 12%. What is the cost if the fee was \$2.50 yesterday?

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4. If 16% of the water in a tank is 56 litres, How much water is in the tank?

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5. The distance between two places of interest is  $\frac{2}{5}$  km. I go  $\frac{1}{4}$  of this distance on foot. How far is still to go?

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6. How long does a car take to cover 120 km at 75km/h?

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7. 25% of the people in a school hall are women, 21% of them are men and the rest are children. What fraction of the people are children?

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8. 126 out of 168 workers in a manufactory are males and the rest are females. What percentage of workers are female?

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9. A car travels 26 km in 15 minutes. How far will it travel in  $\frac{3}{4}$  hour at the same rate?

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10. At a theatre, a child's ticket costs \$6. Mr. and Mrs Parker and their three children paid a total of \$41. How much did each adult's ticket cost?

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**4.6.3 Part C — 10 Extension Questions (3 marks each)**

1. How many 2 digit numbers leave a remainder of 1 when divided by 9?

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2. A rectangular paddock has an area of  $240\text{ m}^2$ . Find the length if it is 8 m longer than the breadth.

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3. Two glasses together contain 140 mL of water. The first glass contain 80 mL less than the second glass. How much water does the second class contain?

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4. Jeffrey bought a new car for \$48,500. He paid a deposit and a monthly installment of \$720 for 5 years in full payment. How much was his deposit?

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5. If  $3\frac{1}{2}$  equal lengths of cloth measure 7 m, What will  $2\frac{1}{2}$  such lengths measure?

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6. Five years ago, Joe's age was  $\frac{1}{9}$  of his mother's. If Joe is 8 years old now, what is his mother's present age?

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7. A rectangle has perimeter 48 cm. The length is twice the breadth. What is the area of rectangle?

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8. A man earns \$52,000 each year. If he saves \$750 each week. What percentage of his income does he spend each year?

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9. Anna, Ben and Jane shared \$67.5. Anna received three times as much as Ben while Ben received twice as much as Jane. How much money did Ben receive?

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10. A group of 5 men on a desert island have enough food for 4 weeks. How many days should the same food last 7 men?

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**4.6.4 Part D — 8 Challenging Questions (5 marks each)**

1. The product of two numbers is 108 and their quotient is 3. What are the numbers?

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2. Two cash registers of a store had a combined total of \$500. When the manager transferred \$25 from one register to the other, each register then had the same amount. How much did the register with the larger amount have before the transfer was made?

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3. A room measuring 5m by 4.5m by 2.9m. If it has two windows measuring 1.5m by 2m and one door measuring 1m by 2m. Find the total area of the walls need to be painted?

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4. A rectangular garden 12 m by 15 m is surrounded by a path of 1.2m wide. Find the area of the path.

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5. What is the most likely number needed to complete the following pattern?

3	1	7	9	4	8
6	1	28	45	?	36

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6. Find the numbers to complete the pattern.

5	3	?	6	9	10
16	10	22	19	?	31

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7. If a certain whole number is subtracted from both the numerator and denominator of  $\frac{31}{42}$ , the answer is  $\frac{2}{3}$ . Find the number.

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8. Ten coins add up to \$5.60. The coins consist of 10c, 50 c and \$1 coins. How many are there of each type of coin?

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