

2 Year 5 Term 2 Week 2 Homework

2.1 Topic 1 — Fractions

1. Evaluate the following fractions:

(a) $4\frac{2}{5} \times 1\frac{1}{4} =$ _____

(b) $4\frac{2}{5} \div 1\frac{1}{4} =$ _____

(c) $4\frac{2}{5} + 1\frac{1}{4} =$ _____

(d) $4\frac{2}{5} - 1\frac{1}{4} =$ _____

(e) $2\frac{2}{5} - \frac{2}{5} \times \frac{1}{3} =$ _____

(f) $4 \times (1 - \frac{1}{2}) \times (1 - \frac{1}{3}) \times (1 - \frac{1}{4}) =$ _____

(g) $\frac{1}{2^2} + \frac{1}{3^2} + \frac{1}{4^2} =$ _____

2. Find the value of the following complex fractions:

(a) $\frac{4}{1 - \frac{3}{4}} =$ _____

(b) $\frac{\frac{3}{4} + \frac{1}{2}}{1\frac{1}{4}} =$ _____

(c) $\frac{5}{1 - \frac{1}{5}} =$ _____

(d) $\frac{5}{6 - \frac{3}{5}} =$ _____

3. Find the fraction of a Quantity:

(a) $\frac{3}{13}$ of 39 = _____

(b) If $\frac{3}{5}$ of a number is 45, the number is _____

(c) $\frac{3}{4}$ of \$2.80 + $\frac{1}{5}$ of \$3.50 equal _____

(d) Half the sum of $1\frac{1}{4}$ and $1\frac{2}{3} =$ _____

4. Find the average of $2\frac{1}{3}$ and $1\frac{1}{4} =$ _____

5. The value of $\frac{42+39 \times 42}{42}$ is _____

6. The value of $\frac{48+31 \times 48}{96}$ is _____

2.2 Topic 2 — Decimals

1. Converting Decimals to Fractions:

(a) $0.044 =$ _____

(b) $0.408 =$ _____

(c) $0.312 =$ _____

(d) $1.005 =$ _____

2. Converting Fractions to Decimals:

(a) $\frac{5}{8} =$ _____

(b) $\frac{13}{20} =$ _____

(c) $\frac{11}{25} =$ _____

(d) $1\frac{1}{8} =$ _____

3. Comparing Decimals: (insert either $<$ or $>$ between the decimals)

(a) 2.128 _____ 2.214

(b) 3.141 _____ 3.057

(c) 0.0213 _____ 0.0132

(d) 0.008 _____ 0.019

4. Rounding off Decimals: (To round off to 2 decimal places, check the digit in the third decimal place. If it is 5 or greater, we add one to the digit in the second decimal place. e.g. **23.456** correct to 2 decimal places gives 23.46; **76.543** correct to 2 decimal places gives 76.54 and **12.345** round off to 2 decimal places gives 12.35)

Round off the following decimals to 2 decimal places:

(a) $34.6284 =$ _____

(b) $8.0834 =$ _____

(c) $14.2453 =$ _____

(d) $0.0793 =$ _____

2.3 Topic 3 — Percentages

1. Express the following decimals to percentages:

(a) $0.92 =$ _____

(b) $0.13 =$ _____

(c) $0.05 =$ _____

(d) $1.02 =$ _____

(e) $0.002 =$ _____

2. Finding the Percentage of a Quantity:

(a) 25% of $812 \text{ kg} =$ _____

(b) 5% of $\$1200 =$ _____

(c) Increase 50 by $20\% =$ _____

(d) Decrease 280 by $40\% =$ _____

(e) 20% of a number is 25 . What is the number? _____

3. Problem Solving

(a) A $21"$ LCD monitor is $\$900$. Discount 20% . What is the discount?

(b) Out of 240 students, 15% play basketball. How many students do not play basketball?

(c) Out of 560 students, 30% went to camp. How many went to the camp?

(d) Jennifer obtained 34 out of 40 marks in a math competition. What percentage was this?

(e) Charles bought a car for $\$18,000$ and later sold it at a loss of $\$4,500$. What percentage of his cost price did he lose?

(f) Find the difference between 4% of $\$52$ and 6% of $\$98$.

2.4 Topic 4 — Money

1. Add the following amounts:

(a) $\$12.35 + \$23.73 + \$0.23 =$ _____

(b) $\$49.00 + \$18.90 + \$1.23 =$ _____

(c) $\$0.25 + \$1.28 + \$124.00 =$ _____

(d) $\$0.68 + \$0.92 + \$12.24 =$ _____

2. Subtract the following amounts:

(a) $\$124.00 - \$25.80 - \$12.34 =$ _____

(b) $\$23.56 - \$0.38 - \$1.24 =$ _____

(c) $\$25.60 - \$7.82 - \$12.36 =$ _____

(d) $\$120.60 - \$12.65 - \$28.80 =$ _____

3. Multiply the following amounts:

(a) $\$36.50 \times 2 =$ _____

(b) $\$125.60 \times 6 =$ _____

(c) $\$72.85 \times 4 =$ _____

(d) $\$321.2 \times 15 =$ _____

4. Divide the following amounts:

(a) $\$10.80 \div 4 =$ _____

(b) $\$12.00 \div 20 =$ _____

(c) $\$36.90 \div 5 =$ _____

(d) $\$93.60 \div 3 =$ _____

5. Problem solving:

(a) Find the cost of 15 metres of material at \$12.64 per metre. _____

(b) How many twenty cent coins in \$21? _____

(c) Price of a game boy is \$180. Discount 20%. How much will it cost? _____

(d) Share \$124.60 equally among 4 people. _____

2.5 Problem Solving (Ratio Problems)

1. Ten marbles in two colours (black and white) each have the same weight. The 3 black marbles weigh altogether 3.9 g. What would the weight of the rest of the marbles?

2. Two boys stand in the playground. The first boy is 1.5 metres tall and casts a shadow of length 90 cm. The shadow of the second boy is 0.78 m long. How tall is the second boy?

3. Together my sister and I have \$125. If I have 50% more than my sister, how much would my sister have?

4. My parents made a deal with me: For every \$3.00 that I saved they would give me \$2.00. I was saving for a Playstation®3 which cost \$980.00 How much did I have to save?

5. When a glass is empty it weighs 320 g and when it is half full it weighs 465 g. How much does the glass weigh when it is full?

2.6 Test Paper 2

2.6.1 Part A — 10 Multiple Choice Questions (1 mark each)

- Which of the following statements is not true?
(A) $217 < 172$ (B) $564 < 654$ (C) $324 > 243$ (D) $416 > 164$
- What does the digit 4 stand for in 3479.2?
(A) 4×10 (B) 4×100 (C) 4×1000 (D) 4×0.1
- How many halves are there in $7\frac{1}{2}$?
(A) 13 (B) 12 (C) 14 (D) 15
- $5 \times 6 + 4 = 2 \times (\boxed{?} + 5)$. Find the missing number in the box.
(A) 13 (B) 12 (C) 14 (D) 15
- If $\frac{1}{8}$ of a number is 13, find the number.
(A) 26 (B) 39 (C) 104 (D) 52
- If tomorrow is Friday, what day was it 9 days ago?
(A) Sunday (B) Thursday (C) Tuesday (D) Wednesday
- Apples are sold at 3 for \$2.20. Bonnie needs 12 apples. How much does she need to pay for them?
(A) \$8.80 (B) \$4.40 (C) \$7.60 (D) \$9.90
- John has one ten-cent coin, one twenty-cent coin and one fifty-cent coin. How many different amounts of money can he make?
(A) 3 (B) 5 (C) 7 (D) 9
- Peter bought 6 oranges for \$0.45 each. He gave the shopkeeper a \$5 note. How much change should he get?
(A) \$1.30 (B) \$2.35 (C) \$3.25 (D) \$2.30
- Dolly saves 75 cents of her pocket money each week. How many weeks will it take her to save \$5.50 to buy a present for her mother?
(A) 6 weeks (B) 7 weeks (C) 8 weeks (D) 9 weeks

2.6.2 Part B — 10 Average Questions (2 marks each)

1. 52% expressed as a fraction is:

2. $\sqrt{13^2 - 12^2} =$

3. A traveller receives \$1.25 in New Zealand currency for each of his Australian dollars. Find the amount in Australian dollars he would need to change \$3000 New Zealand dollars.

4. At a sale, Joe sold 4 games at \$25.60 each and 20 toys at \$12.40 each. How much did Joe receive?

5. A car averages 80km/h for 40 km and 100 km/h for another 60 km. Find the time taken in minutes for the total distance covered.

6. Find the sum of the largest and smallest of the numbers 0.405, 0.305, 0.498 , 0.525, 0.5 and 0.502.

7. The sum of ten numbers is 2345. If one of the ten numbers is changed from 234 to 432, find the new sum of these numbers.

8. There are three different ways of travelling from Town A to Town B and two different ways to travelling from Town B to Town C. Find the number of different ways of travelling from Town A to Town C through B.

9. If you get a test back from a teacher with a mark of 45/60, what percentage would you have scored?

10. Jane started with a number of apples. She gave $\frac{1}{5}$ of them to Anna and $\frac{1}{4}$ of them to Jessica. If she had 44 apples left, how many did she start with?

2.6.3 Part C — 10 Extension Questions (3 marks each)

1. The **Digit Sum** of a number is an one-digit number formed by adding its digits until an one-digit number is formed. Find the digit sum of 234567.

2. Each year the bank sends me \$480 which is the interest I earn on my investment. This is 6% interest - that is, it is 6% of the value of my investment. How much is my investment worth?

3. Sally spent 60% of her money on clothes and 60% of what she had left on food. That left her \$80. How much did she have at the beginning?

4. In changing the water in my fish tank we used a siphon. It could siphon out 1250 mL each minute. After 18 minutes there was three quarters of water left in the tank. How much water in the tank before I started?

5. A salesman receives 25% commission on all sales. How much does he receive if he sells 24 items at \$58 each and another 36 items at \$25 each?

6. A container is $\frac{3}{8}$ full of paint. If there are 17.1 L of paint in the container, how much more paint is required to fill $\frac{5}{6}$ of the container?

7. Tony and John played a game of marbles with their friends. They started with the same number of marbles. When Tony lost 36 marbles and John lost 14 marbles, John had twice as many marbles as Tony. How many marbles did they have altogether?

8. Keith used $\frac{7}{10}$ of his money and saved $\frac{1}{4}$ of the remainder. The rest was given to his wife. What fraction of Keith's money did his wife receive?

9. A metal container $\frac{3}{5}$ full of water, weighs 740 g. When it is $\frac{2}{5}$ full, it weights only 533 g. What is the weight of the empty metal container?

10. I am thinking of a number. Multiply the number by itself, and then by 2 times the number again, and you get 686. What is the number?

2.6.4 Part D — 8 Challenging Questions (5 marks each)

1. Each fortnight Linda saves 35% of her salary. At the end of the year, she has saved \$24,500. How much does she earn each fortnight? Answer to the nearest dollar if necessary.

2. Between 600 and 700 there is a number which is divisible by 5 and whose first two digits are a perfect square. What would you get if you divide this number by 5?

3. If 30 is added to one-third of a number, the result is the double of the number. What is the number?

4. A girl spent $\frac{2}{5}$ of her money. She lost $\frac{2}{5}$ of the remainder and then had \$45 left. How much money did she have at the start?

5. Out of 45 students, 17 have brothers, 22 have sisters and 9 have both. How many students have neither brother nor sisters?

6. If 3 apples are given to each person, 12 apples remain. If each person receives 5 apples, there is no remainder. Find the number of apples.

7. The total price of 8 pens and 6 notebooks was \$10.40. A dozen pens and 5 notebooks cost \$10.80. What is the price of a notebook?

8. A basket containing 8 oranges costs \$16, and an identical basket containing 15 oranges costs \$26.50. What is the cost of the basket?
