

Year 5 Term 1 Homework

Student Name: _____	Grade: _____
Date: _____	Score: _____

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5 Year 5 Term 1 Week 5

5.1 Topic 1 — Finding the Missing Numbers

Exercise 5.1.1

1. Complete the following equivalent ratios:

(a) $2:3 = \text{_____} : 9$

(b) $4:5 = \text{_____} : 20$

(c) $4:9 = \text{_____} : 27$

(d) $12:8 = \text{_____} : 2$

(e) $28:35 = \text{_____} : 5$

(f) $15:18 = \text{_____} : 9$

2. What is the most likely missing number in the following patterns?

(a) 210, 182, 154, _____, ...

(b) 3, 5, 9, 17, _____, ...

(c) 7, 12, 22, 42, _____, ...

(d) 3, 10, 31, 94, _____, ...

(e) 40, 29, 20, _____, 8, ...

(f) $\frac{1}{2}, \frac{3}{4}, \frac{5}{7}, \frac{7}{11}, \text{_____}, \dots$

3. If $\langle M \star N \rangle = M \times N - N$, $\langle \boxed{?} \star 2 \rangle = \langle 5 \star 3 \rangle$. Find the missing number.

4. If $\frac{3}{5}$ of a number is 78, What is the number?

5. I think of a number, square it, halve it, triple it and I am left with 216. What is the number I first thought of?

5.2 Topic 2 — Decimal

Exercise 5.2.1

1. Find the missing numbers:

(a) $41.08 \div (3.6 + \underline{\hspace{2cm}}) = 7.9$

(b) $0.31 \times (\underline{\hspace{2cm}} - 10.6) = 2.914$

(c) $3.14 \times 3.72 + 6.28 \times 3.14 = 10 \times \underline{\hspace{2cm}}$

(d) 16.8, 15.57, 14.34, $\underline{\hspace{2cm}}$, . . .

(e) 2.3, 6.9, 20.7, $\underline{\hspace{2cm}}$, . . .

(f) $1 - \underline{\hspace{2cm}} = 0.4999$

2. Write the following as decimals:

(a) $15 + \frac{2}{5} + \frac{2}{50} + \frac{2}{500} = \underline{\hspace{4cm}}$

(b) $9 + \frac{1}{5} + \frac{2}{100} + \frac{3}{500} = \underline{\hspace{4cm}}$

(c) $123 + \frac{4}{10} + \frac{1}{20} + \frac{6}{1000} = \underline{\hspace{4cm}}$

(d) $12\frac{3}{1000} = \underline{\hspace{4cm}}$

(e) $\frac{2}{50} + 5 + \frac{2}{100} = \underline{\hspace{4cm}}$

(f) $\frac{3}{20} + 450 + \frac{5}{100} = \underline{\hspace{4cm}}$

3. Find the number halfway between:

(a) 0.6 and 0.9 $\underline{\hspace{4cm}}$

(b) 0.06 and 0.09 $\underline{\hspace{4cm}}$

(c) 0.15 and 0.16 $\underline{\hspace{4cm}}$

(d) 0.125 and 0.5 $\underline{\hspace{4cm}}$

4. Write the value 5 in each number:

(a) 123.45 $\underline{\hspace{4cm}}$

(b) 12.345 $\underline{\hspace{4cm}}$

(c) 1.2345 $\underline{\hspace{4cm}}$

(d) 5.4321 $\underline{\hspace{4cm}}$

5.3 Topic 3 — Fractions**Exercise 5.3.1**

1. Arrange the following fractions in ascending order:

(a) $\frac{7}{10}$, $\frac{4}{5}$, $\frac{3}{10}$, _____

(b) $\frac{8}{12}$, $\frac{1}{4}$, $\frac{4}{8}$, _____

(c) $\frac{2}{5}$, $\frac{1}{10}$, $\frac{1}{2}$, _____

(d) $\frac{1}{3}$, $\frac{3}{4}$, $\frac{4}{5}$, _____

(e) $\frac{5}{16}$, $\frac{4}{8}$, $\frac{7}{12}$, _____

(f) $\frac{6}{8}$, $\frac{1}{4}$, $\frac{5}{9}$, _____

2. Arrange the following fractions in descending order:

(a) $\frac{2}{9}$, $\frac{4}{9}$, $\frac{3}{18}$, _____

(b) $\frac{1}{4}$, $\frac{2}{3}$, $\frac{4}{5}$, _____

(c) $\frac{1}{5}$, $\frac{5}{7}$, $\frac{6}{8}$, _____

(d) $\frac{1}{3}$, $\frac{5}{12}$, $\frac{3}{6}$, _____

(e) $\frac{4}{5}$, $\frac{1}{2}$, $\frac{3}{10}$, _____

(f) $\frac{1}{10}$, $\frac{2}{5}$, $\frac{1}{3}$, _____

3. Compare the following fractions:

(a) $\frac{2}{5}$ _____ $\frac{3}{6}$

(b) $\frac{3}{7}$ _____ $\frac{4}{9}$

(c) $\frac{4}{15}$ _____ $\frac{7}{12}$

(d) $\frac{12}{15}$ _____ $\frac{13}{16}$

(e) $\frac{7}{13}$ _____ $\frac{9}{14}$

4. Find the average of the following fractions:

(a) $\frac{1}{12}$ and $\frac{3}{4}$ _____

(b) $\frac{2}{5}$ and $\frac{3}{8}$ _____

(c) $1\frac{1}{3}$ and $2\frac{2}{3}$ _____

5.4 Topic 4 — Percentages

- The word per cent means something out 100. For Example: 9% is read 9 per cent and means 9 out of 100.
- To change a percentage to a fraction, divide it by 100 and then simplify the result.
(e.g. $85\% = \frac{85}{100} = \frac{17}{20}$)
- To change a percentage to a decimal, divide it by 100. (e.g. $21\% = \frac{21}{100} = 0.21$)
- To change a fraction to a percentage, multiply it by 100 and attach the % sign along with it.
(e.g. $1\frac{3}{4} = \frac{7}{4} \times 100\% = \frac{700}{4}\% = 175\%$)
- To change a decimal to a percentage, multiply it by 100 and attach the % sign along with it.
(e.g. $0.25 = 0.25 \times 100\% = 25\%$)

Exercise 5.4.1

1. Write the following percentages as fractions:

(a) $23\% =$ _____

(b) $12\% =$ _____

(c) $45\% =$ _____

(d) $88\% =$ _____

(e) $125\% =$ _____

2. Write the following percentages as decimals:

(a) $15\% =$ _____

(b) $21\% =$ _____

(c) $28\% =$ _____

(d) $5\% =$ _____

(e) $118\% =$ _____

3. Express the following as a percentage:

(a) $\frac{1}{50} =$ _____

(b) $\frac{2}{500} =$ _____

(c) $0.08 =$ _____

(d) $0.85 =$ _____

5.5 Problem Solving (Number Problems)

Exercise 5.5.1

1. _____ The quotient of a number and six increased by 2 is 4. What is the number?
2. _____ Five times a number decreased by 11 is 29. Find the number.
3. _____ Nine is equal to the quotient of a number and 17. Find the number.
4. _____ Eight less than a number is 7. Find the number.
5. _____ Three-fifths of a number increased by 2 is 8. What is the number?
6. _____ Three times a number increased by 3 is 21. Find the number.
7. _____ One-half of a number decreased by 5 is 2. Find the number.
8. _____ One number is ten times another. Their sum is 22. Find the numbers.
9. _____ The quotient of a number and two increased by 17 is 23. What is the number?
10. _____ Twice a number decreased by 13 is 1. Find the number.
11. _____ Two is equal to the quotient of a number and 14. Find the number.
12. _____ Seven less than a number is 12. Find the number.
13. _____ One-third of a number increased by 1 is 2. What is the number?
14. _____ Twice a number increased by 12 is 26. Find the number.
15. _____ Two-fifths of a number decreased by 9 is 5. Find the number.
16. _____ One number is two times another. Their sum is 33. Find the numbers.
17. _____ The quotient of a number and two increased by 15 is 19. What is the number?
18. _____ Five times a number diminished by 54 is 6. Find the number.
19. _____ Three is equal to the quotient of a number and 17. Find the number.
20. _____ Thirteen less than a number is 4. Find the number.

5.6 Test Paper 5**5.6.1 Part A — Quick Questions**

1. $\$12.00 - \$4.85 =$ _____
2. $6^2 - 8 =$ _____
3. $80 - (5 \times 12)$ _____
4. $60 - 29 =$ _____
5. $(9 \times 10) - 9 =$ _____
6. $18 > 30 - 21$. True or false? _____
7. Subtract $\frac{1}{2}$ of 18 from $\frac{1}{3}$ of 66 = _____
8. $95 - 29 =$ _____
9. $35 - 8 - 7 =$ _____
10. $\frac{2}{3}$ of 27 - $\frac{1}{2}$ of 10 = _____
11. $100000 - 36780$ _____
12. $\$29 - \6.37 _____
13. $9^2 - 4^3 =$ _____
14. $41 - 10 - 8 - 9 - 4 =$ _____
15. $(16 - 7) - (14 - 12) =$ _____
16. $\square \times 5 = 35$. $\square = ?$ _____
17. $\square \times \square = 89 - 8$. $\square = ?$ _____
18. $\square \times (16 - 4) = 39 - 3$. $\square = ?$ _____
19. $9 \times \square = 11 \times 6 - 3$. $\square = ?$ _____
20. Simplify $(27 - 7) - (14 - 8) =$ _____

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21. Number 8 less than 7 times 9 _____
22. Name a polygon with six sides _____
23. Cost of 20 articles at 75 ¢ each _____
24. Write $\frac{3}{4}$ as a percentage _____
25. Square 500 _____
26. If 10 books cost \$150, find the cost of 8 books _____
27. Write 135% as a fraction _____
28. Start with 8, double and subtract 9 from it _____
29. Average of 12, 15 and 18 _____
30. $\sqrt{81} + \sqrt{36} =$ _____
31. 5 for 15 ¢ how much for 30? _____
32. Find $\frac{3}{10}$ of 130 _____
33. Find 20% of 60 _____
34. Multiply 85 by 85 _____
35. $12.75 \div 100$ _____
36. How many sides has a decagon? _____
37. How many 20 ¢ coins in \$12.40 _____
38. The angle sum of a triangle _____
39. Find the volume of a cube with an edge of 5 cm in length _____
40. $\frac{1}{5} - \frac{1}{7} =$ _____
41. Interest of \$4500 at 6% p.a for one and a half years = _____
42. Interest of \$17000 at 5% p.a. for 6 months = _____

5.6.2 Part B — Average Questions

1. Jessica ate $\frac{1}{3}$ of a cake and Allie ate $\frac{1}{4}$ of the same cake. What fraction of the cake was left?

2. There were $2\frac{1}{2}$ pizzas. Joe ate $\frac{3}{4}$ of one pizza and Phillip ate $1\frac{1}{6}$. How many pizzas were left?

3. Linda took $2\frac{1}{2}$ minutes to solve first problem. she took $\frac{3}{5}$ minutes less to solve the second problem. How long did she take to solve both problems?

4. Box A weights $2\frac{3}{5}$ kg. Box B weighs half kg more. What is the combined weight of the two boxes?

5. The ratio of dogs to cats in a farm is 4 : 3. If there are 27 cats, how many dogs are there?

6. Alice spent $\frac{3}{5}$ as much money as Emma, and Emma spent \$25 more than Linda. If Linda spent \$60, how much did Alice spend?

7. Bob had 180 stamps. He gave $\frac{1}{3}$ of them to his brother and $\frac{1}{4}$ of the remainder to his sister. How many stamps did he have left?

8. Find the missing number: $1\frac{3}{4} \times \boxed{?} = (2 + 5) \times 3$.

9. I bought seven packets of biscuits. Each packet cost the same and I got 4 ¢ change. How much did I give the cashier?

A. \$1 B. \$2 C. \$3 D. \$4 E. \$5

10. In a triangle the smallest angle is 40° . What is the largest possible angle in the triangle?

A. 70° B. 80° C. 90° D. 100°

11. Three of the options are equal. Which is the odd one out?

A. $\frac{1}{3} + \frac{5}{7}$ B. $\frac{15}{25}$ C. 60% D. $\frac{1}{2} + \frac{1}{10}$

12. How many of these statements are true?

(i) $12 \div \frac{1}{2} = 6$; (ii) $0.3 = 3\%$; (iii) $\frac{1}{9} > \frac{1}{7}$; (iv) $0.4 \times 0.2 = 0.8$

A. none B. one C. two D. three

5.6.4 Part D — Challenging Problems

1. Helen spends one quarter of her pocket money on sweets each week. She saves $\frac{2}{3}$ of what is left. If she saves \$7.50, how much pocket money does she receive each week?

2. Linda had $2\frac{4}{10}$ metres of fabric. She used $\frac{2}{3}$ of it to make a skirt and $\frac{3}{8}$ of the remainder to make a bag. How much fabric did she have left?

3. It takes $\frac{9}{10}$ hours to travel from Town A to Town B by a car. How long is the whole journey in hours and minutes?

4. One quarter of Sally's money is equal to $\frac{2}{5}$ of Belle's money. Belle has \$120. How much does Sally have?

5. $\frac{3}{4}$ of Tony's bookmarks is equal to $\frac{1}{2}$ of Henry's bookmarks. If Tony has 68 bookmarks, how many does Henry have?
