CHAPTER 3: FRACTION 2
LEVEL 1

3.1

Calculators can be used only for questions with '*'

Exercise 1

1. Find the product. Give your answer in its simplest form where necessary.

   (a) $\frac{1}{2}$ of $\frac{2}{3}$ = _____ (b) $\frac{1}{5}$ of $\frac{3}{4}$ = _____

   (c) $\frac{4}{9} \times \frac{1}{2}$ = _____ (d) $\frac{3}{10} \times \frac{5}{6}$ = _____

2. Find the product. Give your answer in its simplest form where necessary.

   (a) $\frac{20}{9} \times \frac{6}{11}$ = _____ (b) $\frac{4}{9} \times \frac{13}{6}$ = _____

   (c) $\frac{21}{10} \times \frac{25}{7}$ = _____ (d) $\frac{30}{7} \times \frac{10}{3}$ = _____

3. Find the product. Give your answer in its simplest form where necessary.

   (a) $1\frac{2}{3} \times 4$ = _____ (b) $3\frac{5}{6} \times 18$ = _____

   (c) $10 \times 4\frac{4}{5}$ = _____ (d) $3\frac{2}{9} \times 21$ = _____

4. Divide. Give your answer in its simplest form where necessary.

   (a) $\frac{5}{6} \div 3$ = _____ (b) $\frac{4}{5} \div 8$ = _____

   (c) $\frac{7}{9} \div 14$ = _____ (d) $\frac{3}{10} \div 9$ = _____

1a) $\frac{1}{3}$

b) $\frac{3}{20}$

c) $\frac{2}{9}$

d) $\frac{1}{4}$

2. (a) $1\frac{7}{33}$
   (b) $\frac{26}{27}$
   (c) $7\frac{1}{7}$
   (d) $14\frac{2}{7}$

3. (c) $6\frac{2}{3}$
   (b) 69
   (c) 48
   (d) $67\frac{2}{3}$

4. (a) $\frac{5}{18}$
   (b) $\frac{1}{10}$
   (c) $\frac{1}{18}$
   (d) $\frac{1}{30}$

5. Mrs Koh had $\frac{1}{2}$ kg of sugar. She used $\frac{3}{4}$ of it to bake a cake. How much sugar did she use?

6. A rectangular mat measures $\frac{7}{10}$ m by $\frac{2}{5}$ m. Find its area.

7. Three quarters of a pizza was shared equally among 6 people. What fraction of the pizza did each person get?

8. Mr Nasri has 5 water containers. Each container holds $2\frac{3}{5}$ litres of drinking water. How much drinking water does he have in all?

5. $\frac{3}{8}$
6. $\frac{7}{25}$
7. $\frac{1}{8}$
8. 13

9. Mr Neo bought $\frac{2}{3}$ kg of meat. He cooked $\frac{3}{4}$ of it. How much meat was left?

9. $\frac{1}{6}$

10. $\frac{4}{9}$

Exercise 2:

1. $\frac{1}{10}$

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10. A pumpkin weighing $\frac{8}{9}$ kg was cut into 2 pieces of equal mass. Find the mass of each piece.

Exercise 2

1. A square rug has a perimeter of $\frac{2}{5}$ m. Find the length of each side of the rug.

2. Mr Choong used $\frac{7}{8}$ litres of oil in 5 days. He used the same amount of oil each day. How much oil did he use each day?

3. A metal pipe of length $\frac{4}{5}$ m is cut into 6 equal pieces. Find the length of each piece in metres.

4. Mdm Gwee is buying some buns for her 4 children. She wants to give each child $2\frac{3}{4}$ buns. How many buns must she buy?

2. $\frac{7}{40}$

3. $\frac{2}{15}$

4. 11

5. There are 40 oranges in the refrigerator. $\frac{5}{8}$ of them are rotten.
   (a) What fraction of the oranges are not rotten?
   (b) How many oranges are not rotten?

5. (a) $\frac{3}{8}$
   (b) 15

6. $18

7. (a) $\frac{3}{4}$
   (b) $\frac{1}{2}$

6. Nurul spent $\frac{2}{9}$ of her money on an assessment book and had $14 left. How much money did she have at first?

7. Harry had some money. He spent $\frac{1}{4}$ of his money on a pack of cards.
   (a) What fraction of his money was left?
   (b) He then spent $\frac{2}{3}$ of the remaining money on food. What fraction of his money did he spend on food?

8. Mr Rashid had some money. He gave $\frac{3}{8}$ of it to his wife and spent $\frac{2}{5}$ of the remainder on food. What fraction of the money did he spend on food?

9. A baker had some eggs. He used $\frac{5}{9}$ of the eggs to bake cakes. He used $\frac{3}{8}$ of the remaining eggs to bake cookies. What fraction of the eggs did he use to bake cookies?

10. Mr Quek baked a cake. He kept $\frac{2}{5}$ of it in the refrigerator.
    (a) What fraction of the cake did he not keep in the refrigerator?
    (b) He shared the remaining cake equally among his 6 children. What fraction of the cake did each child get?

8. $\frac{1}{4}$

9. $\frac{1}{6}$

10. (a) $\frac{3}{5}$

    (b) $\frac{1}{10}$

CHAPTER 3: FRACTION 2
LEVEL 2

3.2

Exercise 1

1. Mrs Gan has $1000. She gives $\frac{1}{10}$ of her money to her daughter and saves $\frac{7}{9}$ of the remaining money in the bank.
   (a) What fraction of the money does she save in the bank?
   (b) How much does she save in the bank?

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2. Mdm Tan cooked 160 packets of nasi lemak. She sold $\frac{7}{8}$ of them in the morning and $\frac{3}{4}$ of the remainder in the afternoon.
   (a) How many packets of nasi lemak did she sell in the morning?
   (b) How many packets of nasi lemak did she sell in the afternoon?
   (c) How many packets of nasi lemak were not sold?

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3. Kevin had 1500 ml of water in his bottle. He drank $\frac{1}{2}$ of it in the morning and $\frac{7}{10}$ of the remainder in the afternoon.
   (a) How much water did he drink in the afternoon?
   (b) How much water did he have left?

1. (a) $\frac{7}{10}$
   (b) $700
2. (a) 140
   (b) 15
   (c) 5
3. (a) 525 ml
   (b) 225 ml

4. Derrick had 280 cards. He gave $\frac{3}{7}$ of it to Hendrick and $\frac{1}{2}$ of the remainder to Joe.
   (a) How many cards did he give to Hendrick?
   (b) How many cards did he have left?

5. Lynn had some money. She spent $\frac{1}{6}$ of it to buy food and $\frac{2}{5}$ of the remainder on a file. The file cost her $4.
   (a) How much money did she use to buy food?
   (b) How much money had she left?
   (c) How much money did she have at first?

6. Mr Lee had some sweets. He gave $\frac{2}{9}$ of them to David and $\frac{1}{7}$ of the remainder to Evelyn. He was left with 24 sweets.
   (a) How many sweets did he give to David?
   (b) How many sweets did he give to Evelyn?
   (c) How many sweets did he have at first?

4 (a) 120
(b) 80

5 (a) $2
(b) $6
(c) $12

6 (a) 8
(b) 8
(c) 36

7. Ron had some money. He spent $\frac{1}{5}$ of it on a watch. Then, he spent $\frac{5}{8}$ of the remainder on a toy. He had \$15 left.
   (a) How much money did he spend on the watch?
   (b) How much money did he have at first?
   (c) How much more money did he spend on the toy than on the watch?

7 (a) \$10
(b) \$50
(c) \$15

8. 30

9 (a) 228
(b) 288

8. Jill had 135 donation tickets. She sold $\frac{1}{3}$ of it to her relatives and $\frac{1}{6}$ of the remainder to her friends. How many more tickets did she sell to her relatives than to her friends?

9. Kieron had some nails. He used $\frac{5}{6}$ of them to make a cupboard and $\frac{1}{4}$ of the remaining nails to make a chair. He had 36 nails left.
   (a) How many more nails did he use for the cupboard than the chair?
   (b) How many nails did he have at first?

10. Mrs Yeo has some animals in her pet shop. $\frac{5}{9}$ of them are dogs and $\frac{7}{12}$ of the remainder are cats. The rest are hamsters. She has 16 more dogs than cats.
    (a) How many hamsters does she have?
    (b) How many animals are there in her pet shop?

10 (a) 10
(b) 54

Exercise 2:

(1) 3

(2) 4

(3) 4

(4) 1

Exercise 2

Choose the correct answer and write its number in the brackets provided.

1. What is the value of $\frac{12}{7} \times \frac{3}{4}$?

   (1) $2\frac{2}{7}$ (2) $1\frac{4}{11}$

   (3) $1\frac{2}{7}$ (4) $\frac{7}{16}$ ( )

2. Mdm Alinah has $\frac{9}{10}$ litres of fruit juice. She shares it equally among 6 children. How many litres of fruit juice does each of the children get?

   (1) $6\frac{9}{10}\ l$ (2) $5\frac{2}{5}\ l$

   (3) $5\frac{1}{10}\ l$ (4) $\frac{3}{20}\ l$ (

3. A rectangle has a perimeter of $\frac{9}{10}$ m. Its length is $\frac{2}{5}$ m. Find its breadth.

   (1) $\frac{9}{25}$ m (2) $\frac{1}{2}$ m

   (3) $\frac{1}{10}$ m (4) $\frac{1}{20}$ m ( )

4. Adrian gave $\frac{4}{9}$ of his money to his mother. He gave $\frac{2}{5}$ of the remainder to his father. What fraction of his money did he have left?

   (1) $\frac{1}{3}$ (2) $\frac{2}{25}$

   (3) $\frac{8}{25}$ (4) $\frac{5}{9}$ ( )

5. Fanny mixed some juices to make a cocktail. $\frac{1}{4}$ of the cocktail was grape juice. $\frac{5}{6}$ of the remainder was orange juice. The rest was pineapple juice. What fraction of the cocktail was pineapple juice?

(1) $\frac{3}{4}$ (2) $\frac{1}{8}$

(3) $\frac{7}{12}$ (4) $\frac{5}{24}$ ( )

6. Mr Pang spent $\frac{1}{10}$ of his money on transport. He spent $\frac{1}{3}$ of the remainder on food. What fraction did he have left?

(1) $\frac{2}{3}$ (2) $\frac{3}{5}$

(3) $\frac{9}{10}$ (4) $\frac{1}{30}$ ( )

7. There are 70 people in a room. $\frac{3}{10}$ of them are adults. $\frac{1}{7}$ of the remainder are boys. The rest are girls. How many girls are there?

(1) 42 (2) 21

(3) 3 (4) 10 ( )

8. There are some fruits in a basket. $\frac{1}{4}$ of them are apples. $\frac{2}{9}$ of the remainder are pears. The rest are oranges. If there are 6 pears, how many fruits are there in the basket?

(1) 8 (2) 24

(3) 36 (4) 108 ( )

9. Ms Nadiah spent $\frac{1}{7}$ of her money on cosmetics. She spent $\frac{5}{6}$ of the remainder on clothes. She spent $420 more on clothes than on cosmetics. How much money did she have left?

(1) $50 (2) $60

(3) $105 (4) $504 ( )

10. Mr Ang made some pies. He sold $\frac{5}{8}$ of them in the morning and $\frac{1}{3}$ of the remainder in the afternoon. He had 48 pies left. How many more pies did he sell in the morning than in the afternoon?

(1) 192 (2) 96

(3) 64 (4) 30 ( )

(5) 2

(6) 2

(7) 1

(8) 3

(9) 3

(10) 2

CHAPTER 3: FRACTION 2
LEVEL 3

3.3

Exercise 1

*1. Tom had $\frac{1}{6}$ as many marbles as Willy. Tom had $\frac{2}{3}$ as many marbles as Zack. If they had 204 marbles altogether, how many marbles did each of them have?

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*2. Mr Benny had thrice as much money as Mr Kang. Mr Hong had $\frac{5}{12}$ as much money as Mr Benny. If they had $2520 in total, how much money did each of them have?

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3. Patrick is $\frac{3}{4}$ as tall as his father. He is $\frac{6}{7}$ as tall as his mother. If Patrick's father is 22 cm taller than his mother, how tall is Patrick?

1. Tom = 24
   Zack = 36
   Willy = 144
2. Mr Kang = $480
   Mr Hong = $600
   Mr Benny = $1440
3. 132 cm

4. $\frac{1}{3}$ of Glen's money is equal to $\frac{3}{5}$ of Nick's money. Glen has \$36. Find the amount of money that Nick has.

5. $\frac{2}{5}$ of X is equal to $\frac{4}{9}$ of Y. If X is greater than Y by 100, what is the sum of X and Y?

6. Mr Boey and Mrs Boey had a total of \$900. After Mrs Boey spent $\frac{4}{5}$ of her money and Mr Boey spent $\frac{2}{5}$ of his money, they had an equal amount of money left. How much money did each of them spend?

4. \$20

5. 1900

6. Mr Boey = \$90
   Mrs Boey = \$540

7. In a class, $\frac{2}{7}$ of the number of boys is equal to $\frac{4}{5}$ of the number of girls. If there are 18 more boys than girls, how many boys are there in the class?

8. Kumar had $\frac{3}{8}$ as much money as Benjamin. Then, Benjamin spent $48. Now, Kumar had $\frac{1}{2}$ as much money as Benjamin. How much money did each of them have at first?

9. At first, $\frac{3}{7}$ of the pupils in a class were girls. Then, 12 girls from another clas came over. Now, $\frac{3}{5}$ of the pupils were girls. How many pupils were there ir the class at first?

7. 28

8. Kumar = $72
Benjamin = $192

9. 28

10. In a class, $\frac{1}{3}$ of the pupils needed glasses. Then, 3 pupils who needed glasses were transferred out of the class. Now, the fraction of the pupils who needed glasses became $\frac{1}{4}$. How many pupils were there in the class in the end?

10. 24

Exercise 2

1. Wednesday

2. 8th day

Exercise 2

1. Janet read $\frac{3}{10}$ of a novel on Saturday and $\frac{1}{10}$ of the novel on Sunday. If she is able to read $\frac{1}{5}$ of the novel every day from Monday onwards, which day will she complete reading the novel?

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2. Terry is on holiday in America. He uses $\frac{1}{12}$ of his money on the 1st day and $\frac{1}{6}$ of his money on the 2nd day. If he decides to use $\frac{1}{8}$ of his money every day from the 3rd day onwards, which day will he use up all his money?

3. A wealthy man had some money. He gave $\frac{1}{3}$ of it to his wife. He then gave $\frac{1}{5}$ of the remainder to his son and $\frac{1}{4}$ of the remainder to his daughter. The rest of the remainder was given to charity.
   (a) What fraction of the money was given to his daughter?
   (b) If his wife got $200 000, how much money was given to charity?

3. $220 000

4 (a) $\frac{1}{24}$
(b) 72

5. 30 years

4. Louis had some marbles. He gave $\frac{7}{12}$ of them to Paul. He then gave $\frac{2}{5}$ of the remainder to Hafiz and $\frac{1}{10}$ of the remainder to Nicholas. He kept the rest of the marbles.
   (a) What fraction of the marbles did Louis give to Nicholas?
   (b) If Hafiz got 12 marbles, how many marbles did Louis have at first?

5. 5 years ago, Lucas was $\frac{5}{9}$ as old as his father. Now, Lucas' age is $\frac{3}{5}$ of hi father's age. How old is Lucas now?

6. Now, Mabel's age is $\frac{1}{4}$ of her sister's age. 4 years from now, her age will be $\frac{1}{2}$ of her sister's age. How old will Mabel's sister be 4 years from now?

6. 12 years

7. 16

8. $40

7. There were $\frac{3}{5}$ as many boys as girls in a class. Then, 6 boys and 6 girls joined the class. Now, there are $\frac{3}{4}$ as many boys as girls in the class. How many pupils were there in the class at first?

3. At first, Eddy had $\frac{2}{5}$ as much money as Caleb. Then, Caleb gave $10 to Eddy. Now, Eddy had $\frac{5}{9}$ as much money as Caleb. How much did Eddy have at first?

9. At first, there were $\frac{4}{5}$ as many boys as girls on a bus. Then, 1 boy alighted from the bus and 1 girl boarded the bus. Now, there were $\frac{5}{7}$ as many boys as girls on the bus. Find the number of boys and the number of girls on the bus now.

9. 15

10. 1700 ml

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10. Container A and Container B had some water. Container A had $\frac{8}{9}$ as much water as Container B. Then, 300 m*l* of water was poured from Container A to Container B. After that, Container A had $\frac{5}{12}$ as much water as Container B. How much water altogether was there in both containers?