



NANYANG PRIMARY SCHOOL

**MID-YEAR EXAMINATION
2022**

PRIMARY 4

**MATHEMATICS
(BOOKLET A)**

Total Duration for Booklets A and B: 1 hour 45 minutes

Additional materials: Optical Answer Sheet (OAS)

INSTRUCTIONS TO PUPILS

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Shade your answers in the Optical Answer Sheet (OAS) provided.

Name: _____ ()

Class: Primary 4 ()

Questions 1 to 15 carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade your answer on the Optical Answer Sheet. (30 marks)

1. In 71 563, what does the digit 5 stand for?

- (1) 5
- (2) 50
- (3) 500
- (4) 5000

2. Write 18 204 in words.

- (1) Eighteen thousand and twenty-four
- (2) Eighteen thousand, two hundred and four
- (3) Eighteen thousand, two hundred and forty
- (4) Eighteen thousand, two hundred and fourteen

3. Arrange the following numbers in order. Begin with the greatest number.

60 135

60 153

60 053

65 053

greatest

smallest

- (1) 60 053 , 60 135 , 60 153 , 65 053
- (2) 60 053 , 60 153 , 60 135 , 65 053
- (3) 65 053 , 60 053 , 60 135 , 60 153
- (4) 65 053 , 60 153 , 60 135 , 60 053

4. Round 3652 to the nearest hundred.

(1) 4000

(2) 3700

(3) 3650

(4) 3600

5. Which one of the following is **not** a factor of 64?

(1) 6

(2) 2

(3) 8

(4) 4

6. What is the missing fraction in the box?

$$\frac{2}{3} = \boxed{?}$$

(1) $\frac{8}{9}$

(2) $\frac{9}{12}$

(3) $\frac{10}{15}$

(4) $\frac{16}{18}$

7. Which of the following fractions is less than $\frac{1}{2}$?

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

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

(3) $\frac{5}{9}$

(4) $\frac{5}{11}$

8. Which of the following improper fractions is equivalent to $5\frac{3}{8}$?




(1) $\frac{23}{8}$

(2) $\frac{29}{8}$

(3) $\frac{43}{8}$

(4) $\frac{120}{8}$

9. What fraction of the toys are toy cars?

Toy Planes	
Toy Cars	
Toy Boats	

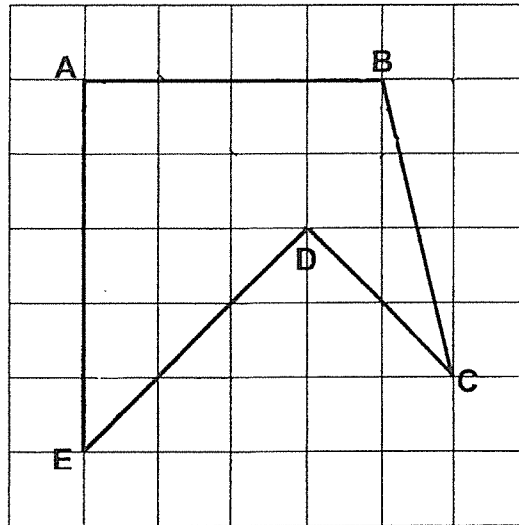
(1) $\frac{1}{5}$

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

(3) $\frac{3}{10}$

(4) $\frac{10}{2}$

10. In figure ABCDE, which angle is equal to 45° ?

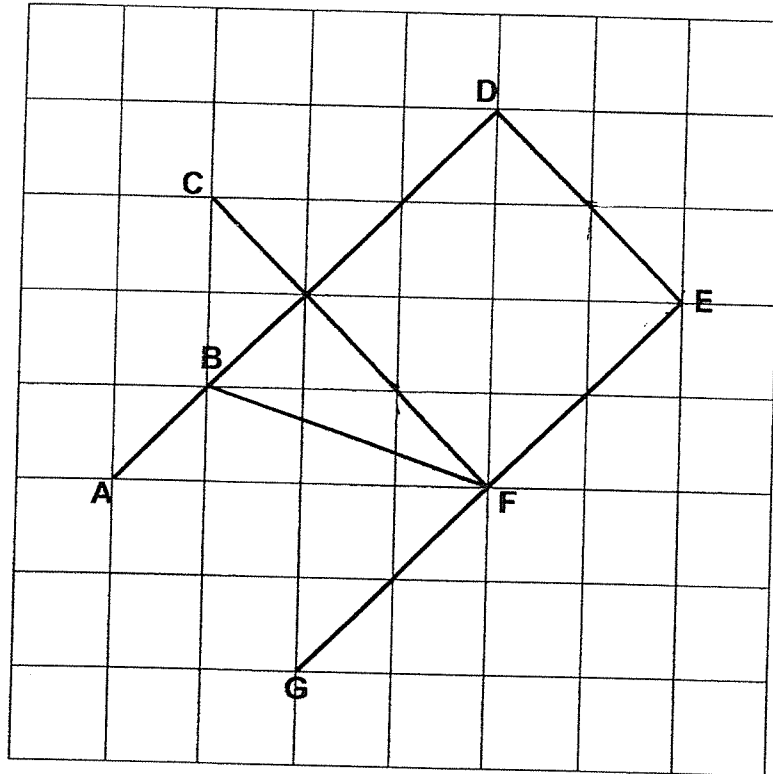


- (1) $\angle BAE$
- (2) $\angle AED$
- (3) $\angle ABC$
- (4) $\angle BCD$

11. Ahmad earns \$5398 a month. He spends \$1806 each month and saves the remaining money. How much money does he save after half a year?

- (1) \$27 552
- (2) \$21 552
- (3) \$4592
- (4) \$3592

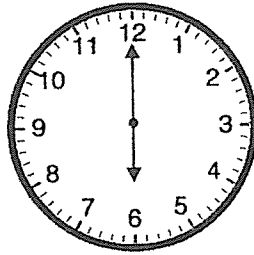
12. Look at the figure below. ABD, GFE, BF, CF and DE are straight lines.



Name the line that is parallel to line CF.

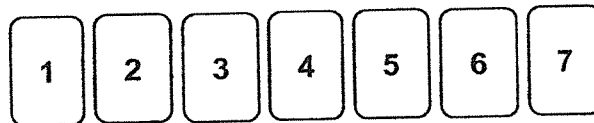
- (1) AD
- (2) BF
- (3) DE
- (4) GE

13. A soccer match started at 6 p.m. as shown in the clock below.



The soccer match ended at 7.15 p.m. that evening. How many right angles will the minute hand make by the end of the game?

- (1) 1
(2) 2
(3) 3
(4) 5
14. Abigail and Elyse were playing with 7 number cards as shown below.



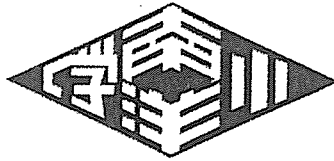
Abigail started by using 4 different number cards to form a 4-digit odd number. Elyse then used the remaining cards to form a 3-digit even number. Each number card was only used once.

What is the greatest difference between the two numbers that the girls formed?

- (1) 7232
(2) 7285
(3) 7529
(4) 7531

15. Jean, Kate, Lindy and Mark each wore a different coloured T-shirt: red, orange, blue and black. Lindy did not wear red or orange. Jean liked Mark's blue T-shirt. Kate did not have a red T-shirt. What was the colour of the T-shirt that Jean wear?

- (1) Red
- (2) Blue
- (3) Black
- (4) Orange



NANYANG PRIMARY SCHOOL

**MID-YEAR EXAMINATION
2022**

PRIMARY 4

**MATHEMATICS
(BOOKLET B)**

Total Duration for Booklets A and B: 1 hour 45 minutes

INSTRUCTIONS TO PUPILS

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Write your answers in this booklet.

Name: _____ ()

Class: Primary 4 ()

Parent's Signature: _____

Booklet A	/ 30
Booklet B	/ 70
Total	/ 100

Please sign and return the examination paper the next day. Any queries should be raised at the same time when returning paper.

Questions 16 to 35 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (40 marks)

16. List all the common factors of 54 and 81.

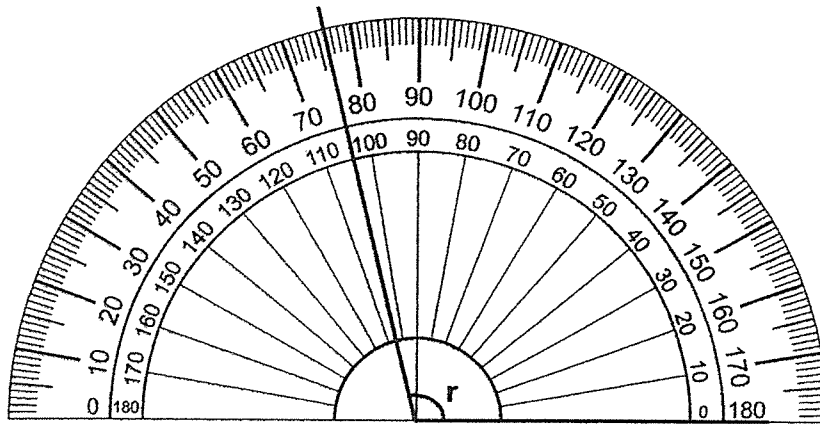
Ans: _____

17. Which of the 2 numbers are **not** multiples of 9?

27	54	38	81	75
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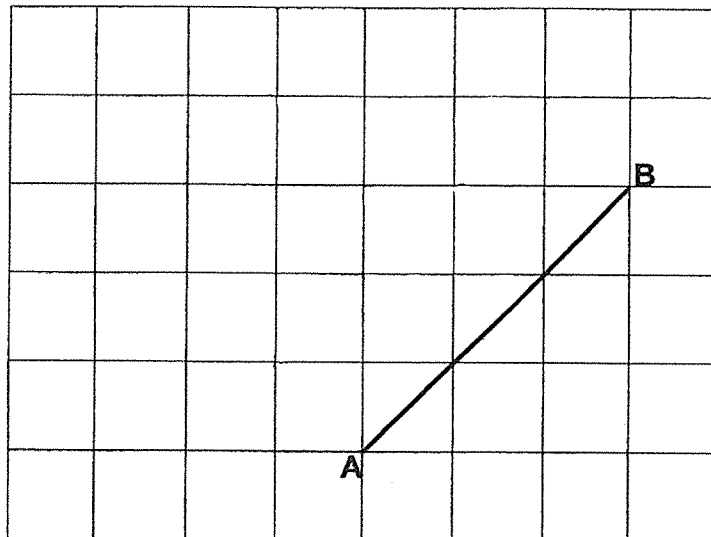
Ans: _____ and _____

18. (a) Find $\angle r$.



Ans: _____ °

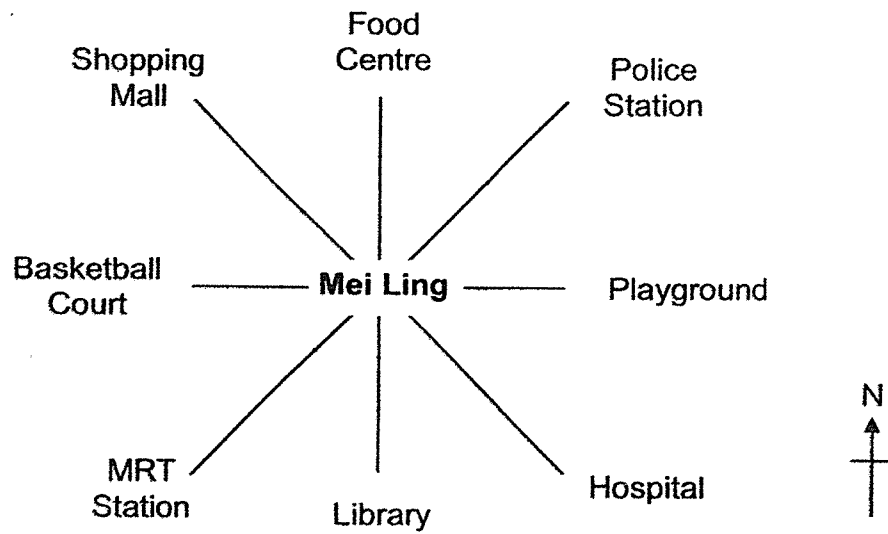
(b) Draw a line WX that is perpendicular to line AB.



19. Using a protractor and a ruler, draw $\angle ABC = 67^\circ$. Mark and label the angle. The line AB has been drawn for you.

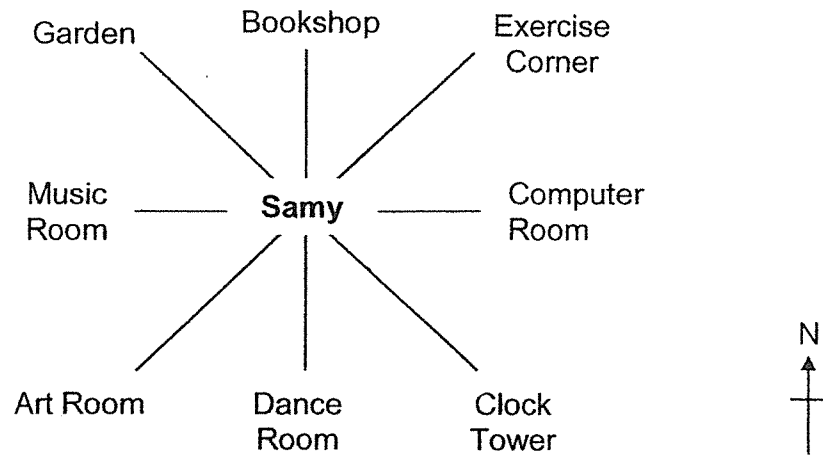


20. Mei Ling is facing the Police Station at first. She makes a $\frac{3}{4}$ turn anti-clockwise. Where is Mei Ling facing in the end?



Ans: _____

21. Samy is facing north at first and he turns to face the Clock Tower. What angle has Samy turned through in the clockwise direction?



Ans: _____°

22. Complete the number patterns.

(a) 32 475, 32 485, 32 495, _____, 32 515, 32 525

(b) _____, 91 205, 93 205, 95 205, 97 205

Ans: (a) _____

(b) _____

23. Jane can pack all the cookies into boxes of 6 cookies or boxes of 8 cookies, without having any remaining cookies. What is the smallest possible number of cookies Jane can have?

Ans: _____

24. A refrigerator cost \$1695 more than a television set. Mr Lim would have \$367 left when he chose to buy the television set. How much more money would Mr Lim need when he chose to buy the refrigerator instead?

Ans: \$ _____

25. A machine can produce 1960 boxes in 8 hours. How many boxes can 12 such machines produce in 1 hour?

Ans: _____

26. There are 2970 children in a school. There are 5 times as many boys as girls. How many girls are there in the school?

Ans: _____

27. Eason had 56 cards at first. He gave away $\frac{3}{7}$ of his cards. How many cards did he have left?

Ans: _____

28. Packet A contains $\frac{3}{5}$ kg of beans. Packet B contains $\frac{1}{8}$ kg more beans than Packet A. What is the total mass of beans in Packet A and Packet B? Express your answer as a mixed number in its simplest form.

Ans: _____ kg

29. Maya cut a whole cake into 12 equal slices. Her friends ate $\frac{1}{2}$ of the cake and her cousins ate 5 slices of the cake. What fraction of the cake was eaten?

Ans: _____

30. There was $\frac{3}{8}$ ℓ of water in a pail at first. Xiao Tong poured $\frac{1}{4}$ ℓ of water into the pail. How much water is there in the pail now?

Ans: _____ ℓ

31. Elsa took $\frac{7}{10}$ h to drive from her house to the zoo. She took $\frac{1}{5}$ h less to drive back home from the zoo. What was the total amount of time she took to drive from her house to the zoo and drive back home? Express your answer as an improper fraction in its simplest form.

Ans: _____ h

32. A bag of potatoes has a mass of $\frac{1}{2}$ kg. The bag of potatoes is $\frac{1}{4}$ kg lighter than a bag of apples. What is the total mass of 2 such bags of apples?

Ans: _____ kg

33. A book cost \$28 more than a pencil case. Marilyn paid a total of \$527 for 5 such books and 4 such pencil cases. How much money did each pencil case cost?

Ans: \$ _____

34. Mother gave Ariel, Brenda and Chong Ming some marbles. Ariel received $\frac{1}{6}$ of the marbles, Brenda received $\frac{3}{4}$ of the marbles and Chong Ming received the remaining 35 marbles. How many marbles did Mother give to the 3 of them in total?

Ans: _____

35. There was a total of 160 green beads and red beads. After $\frac{2}{3}$ of the green beads and 12 red beads were removed, there was an equal number of green beads and red beads left. How many red beads were there left?

Ans: _____

For questions 36 to 43, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [] at the end of each question or part-question. (30 marks)

36. Thavanesh had 450 chocolates. He gave 172 chocolates to his friends. He packed all the remaining chocolates into bags of 8 and kept the leftovers for himself. How many chocolates did Thavanesh keep for himself?

Ans: _____ [3]

37. Mrs Quah bought more than 20 but fewer than 50 pencils for her students. When she gives each student 8 pencils, she will be short of 2 pencils. When she gives each student 9 pencils, she will need 8 more pencils. How many pencils did Mrs Quah buy?

Ans: _____ [3]

38. Rebecca had a piece of ribbon. She used $\frac{1}{3}$ of the ribbon to tie a present and $\frac{1}{5}$ of the ribbon to decorate a dress.

- (a) What fraction of the piece of ribbon was used to tie the present and to decorate the dress?
- (b) She used 240 cm of ribbon in total. How long was the piece of ribbon at first?

Ans: (a) _____ [2]

(b) _____ [2]

39. A red pole is 5 m long. It is $\frac{3}{10}$ m longer than a blue pole.

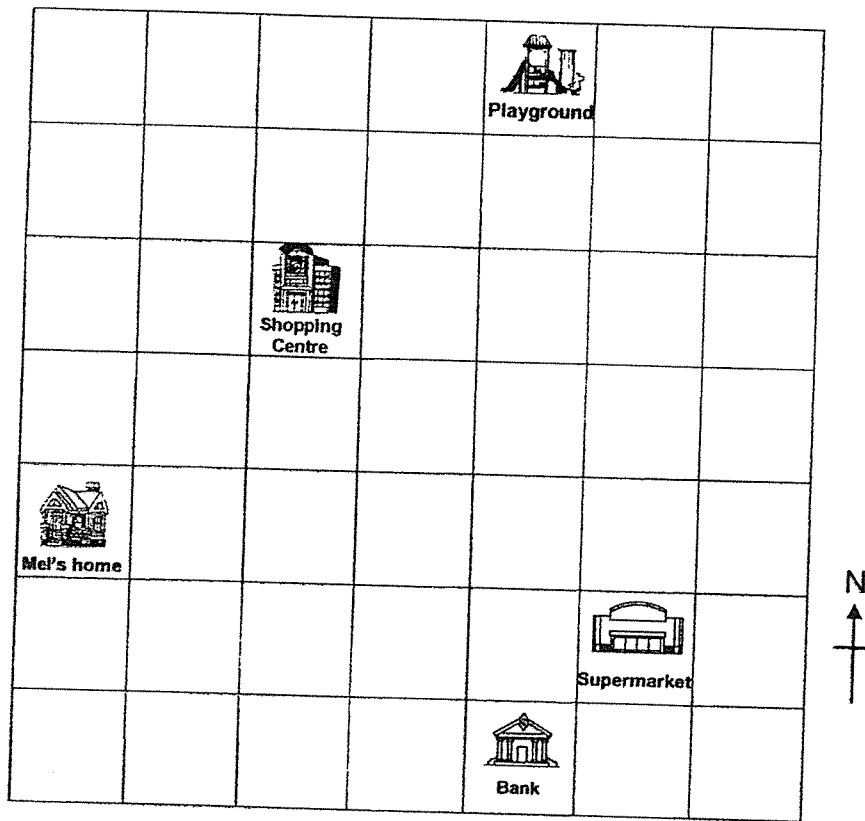
(a) What is the length of the blue pole?

(b) What is the total length of the red pole and blue pole?

Ans: (a) _____ [2]

(b) _____ [2]

40. Mel's home, the bank, the supermarket, the shopping centre and the playground are located as shown in the square grid below.



- In which direction is the playground from Mel's home?
- In which direction is the bank from the supermarket?
- Which place is north of the bank?
- A library will be built in the neighbourhood. The following sentences describe the location of the library.
 - Mel's home is north-west of the library.
 - The library is south of the shopping centre.

Mark 'X' on the grid above to show the location of the library. [1]

- Ans: (a) _____ [1]
 (b) _____ [1]
 (c) _____ [1]

41. Amiya and Ben had the same number of stickers at first. Ben used 3600 stickers. In the end, Amiya had 4 times as many stickers as Ben.

(a) How many stickers did Amiya have at first?

(b) How many stickers must Amiya give to Ben so that both of them would have the same number of stickers again?

Ans: (a) _____ [2]

(b) _____ [2]

42. Amanda uses grey tiles and white tiles to form figures that follow a pattern. The first four figures are shown below.

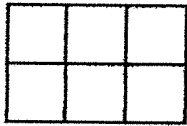


Figure 1

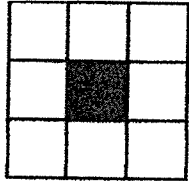


Figure 2

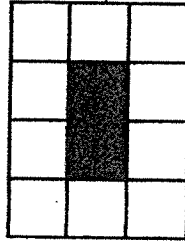


Figure 3

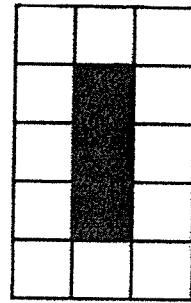


Figure 4

- (a) What is the total number of grey tiles and white tiles Amanda would use for Figure 8?
- (b) How many white tiles would she use for Figure 36?

Ans: (a) _____ [2]

(b) _____ [2]

43. Wendy spent $\frac{2}{3}$ of her money on a bag, $\frac{1}{9}$ of her money on a pair of shoes and saved the rest. The amount of money she saved was \$100 less than the total amount of money she spent.

(a) What fraction of her money did Wendy spend?

(b) Wendy gave half of her savings to her sister. How much money did Wendy give to her sister?

Ans: (a) _____ [2]

(b) _____ [2]

End of Paper

Questions 1 to 15 carry 2 marks each. For each question, four options are given. One of them is the correct answer. Mark your choice (1, 2, 3 or 4) and shade your answer on the Optical Answer Sheet. (40 marks)

1. In 71 593, what does the digit 6 stand for?

- (1) 5
 - (2) 50
 - (3) 500
 - (4) 5000
- (3)

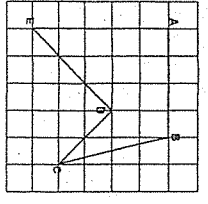
2. Write 18 204 in words.

- (1) Eighteen thousand and twenty-four
 - (2) Eighteen thousand, two hundred and four
 - (3) Eighteen thousand, two hundred and forty
 - (4) Eighteen thousand, two hundred and fourteen
- (2)

3. Arrange the following numbers in order. Begin with the greatest number.

- 60 135 60 153 60 053 65 053
- greatest smallest
- (1) 60 053, 60 135, 60 153, 65 053
 - (2) 60 053, 60 153, 60 135, 65 053
 - (3) 65 053, 60 053, 60 135, 60 153
 - (4) 65 053, 60 153, 60 135, 60 053
- (4)

10. In figure ABCDE, which angle is equal to 45°?



- (1) $\angle BAE$
 - (2) $\angle AED$ ✓
 - (3) $\angle ABC$
 - (4) $\angle BCD$
- (2)

11. Ahmed earns \$5308 a month. He spends \$1800 each month and saves the remaining money. How much money does he save after half a year?

- (1) \$27 652
 - (2) \$21 652
 - (3) \$4 692
 - (4) \$3 992
- (2)
- $\$5308 - \$1800 = \$3508$
 $\$3508 \times 6 = \$21\,048$

4. Round 3652 to the nearest 100.

- (1) 4000
 - (2) 3700
 - (3) 3650
 - (4) 3600
- (2)

5. Which one of the following is not a factor of 64?

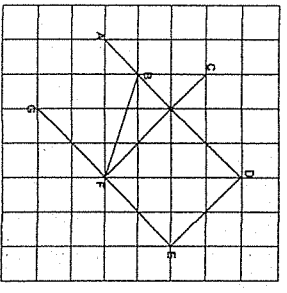
- (1) 6
 - (2) 2
 - (3) 8
 - (4) 4
- (1)

6. What is the missing fraction in the box?

$$\frac{2}{3} = \frac{?}{6}$$

- (1) $\frac{8}{9}$
 - (2) $\frac{9}{12} = \frac{3}{4}$
 - (3) $\frac{10}{15} = \frac{2}{3}$
 - (4) $\frac{16}{18} = \frac{8}{9}$
- (3)

12. Look at the figure below. AB, CD, EF and DE are straight lines.



- (1) AD
 - (2) BF
 - (3) DE
 - (4) CE
- (3)

Name the line that is parallel to the CE.

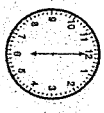
7. Which of the following fractions is less than $\frac{1}{2}$?

- (1) $\frac{2}{4} = \frac{1}{2}$
 - (2) $\frac{4}{7}$ more than $\frac{1}{2}$
 - (3) $\frac{5}{9}$ more than $\frac{1}{2}$
 - (4) $\frac{11}{15}$ less than $\frac{1}{2}$
- (4)

8. Which of the following improper fractions is equivalent to $5\frac{2}{3}$?

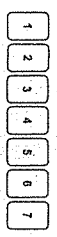
- (1) $\frac{22}{8}$
 - (2) $\frac{29}{8}$
 - (3) $\frac{43}{8}$
 - (4) $\frac{120}{8}$
- (3)

13. A soccer match started at 6 p.m. as shown in the clock below.



- The soccer match ended at 7:15 p.m. that evening. How many right angles will the minute hand make by the end of the game?
- (1) 1
 - (2) 2
 - (3) 3
 - (4) 5
- (4)

14. Abdul and Elysa were playing with 7 number cards as shown below.



Abdul started by using 4 different number cards to form a 4-digit odd number. Elysa then used the remaining 3 number cards to form a 3-digit even number. Each number card was only used once. What is the greatest difference between the two numbers that they formed?

- (1) 7232
 - (2) 7285
 - (3) 7529
 - (4) 7531
- (3)
- Greatest 4-digit odd number
7653
Smallest 3-digit even number
124
Greatest difference
7653 - 124 = 7529 (Ans)

9. What fraction of the toys are toy cars?

Toy Planes		3
Toy Cars		2
Toy Balls		5

- (1) $\frac{1}{5}$
 - (2) $\frac{1}{7}$
 - (3) $\frac{3}{10}$
 - (4) $\frac{10}{7}$
- (1)
- $\frac{2}{10} = \frac{1}{5}$

15. Jean, Kate, Lindy and Mark each wore a different coloured T-shirt: red, orange, blue and black. Lindy did not wear red or orange. Jean liked Mark's blue T-shirt. Kate did not have a red T-shirt. What was the colour of the T-shirt that Jean wore?

	Red	Orange	Blue	Black
Jean	✓	X	X	X
Kate	X	✓	X	X
Lindy	X	X	X	✓
Mark	X	X	✓	X

(1)

35. There was a total of 160 green beads and red beads. After $\frac{2}{3}$ of the green beads and 12 red beads were removed, there was an equal number of green beads and red beads left. How many red beads were there left?

Before

Green	160
Red	12

After

Green	104
Red	12

$$4x + 12 = 160 - 12$$

$$4x + 12 = 148$$

$$4x = 148 - 12$$

$$4x = 136$$

$$x = 34$$

Ans: 34

36. For questions 36 to 43, simplify mentally and write your answers in the spaces provided. The number of marks is shown in (do marks) at the end of each question or part-question.

38. Tharavath had 450 chocolates. He gave 172 chocolates to his friend. He packed all the remaining chocolates into bags of 8 and kept the remainder for himself. How many chocolates did Tharavath keep for himself?

$$450 - 172 = 278$$

$$278 \div 8 = 34 \text{ R } 6$$

Ans: 6

37. Mrs Quah bought more than 20 but fewer than 50 pencils for her students. When she gives each student 9 pencils, she will be short of 2 pencils. How many pencils did Mrs Quah buy?

Number of pencils	24	32	40	48
Short of	22	30	38	46

Ans: 46

38. Rebecca had a piece of ribbon. She used $\frac{1}{3}$ of the ribbon to tie a present and $\frac{1}{5}$ of the ribbon to decorate a dress.

(a) What fraction of the piece of ribbon was used to tie the present and to decorate the dress?

$$\frac{1}{3} + \frac{1}{5} = \frac{5}{15} + \frac{3}{15} = \frac{8}{15}$$

(b) She used 240 cm of ribbon in total. How long was the piece of ribbon that she used to tie the present?

$$\frac{1}{3} \rightarrow 240 \text{ cm} \div 3 = 80 \text{ cm}$$

$$\frac{1}{5} \rightarrow 30 \text{ cm} \times 15 = 450 \text{ cm}$$

Ans: (a) $\frac{8}{15}$ (b) 450 cm

39. A red pole is 5 m long. It is $\frac{3}{10}$ m longer than a blue pole.

(a) What is the length of the blue pole?

(b) What is the total length of the red pole and blue pole?

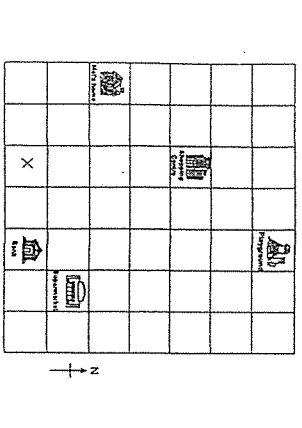
(a) Blue $\rightarrow 5 \text{ m} - \frac{3}{10} \text{ m}$

$$= 4\frac{7}{10} \text{ m} - \frac{3}{10} \text{ m}$$

$$= 4\frac{4}{10} \text{ m} = 4\frac{2}{5} \text{ m}$$

(b) Total $\rightarrow 5 \text{ m} + 4\frac{2}{5} \text{ m} = 9\frac{2}{5} \text{ m}$

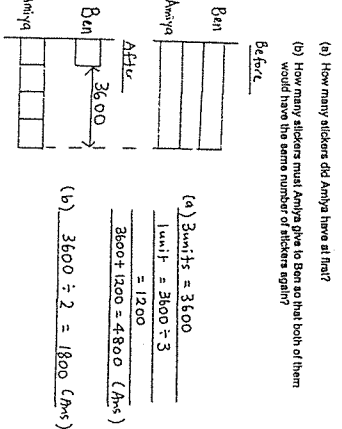
40. Mei's home, the bank, the supermarket, the shopping centre and the playground are located as shown in the square grid below.



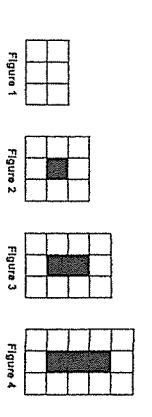
- (a) In which direction is the playground from Mei's home?
- (b) In which direction is the bank from the supermarket?
- (c) Which place is north of the bank?
- (d) A library will be built in the unshaded area. The following sentences describe the location of the library.
- Mei's home is north-west of the library.
 - The library is south of the shopping centre.
- Mark 'X' on the grid above to show the location of the library.

- Ans: (a) north-west (1)
- (b) South-west (1)
- (c) playground (1)

41. Anya and Ben had the same number of stickers at first. Ben used 3600 stickers. In the end, Anya had 4 times as many stickers as Ben.



42. Amanda uses grey tiles and white tiles to form figures that follow a pattern. The first four figures are shown below.



- (a) What is the total number of grey tiles and white tiles Amanda would use for Figure 8?
- (b) How many white tiles would she use for Figure 367?
- (a) $3 \times 9 = 27$ (Ans)
- (b) $3 \times 37 = 111$
- $$111 - 35 = 76$$
- Ans: (a) 27 (b) 76

43. Wendy spent $\frac{2}{5}$ of her money on a bag, $\frac{1}{5}$ of her money on a pair of shoes and saved the rest. The amount of money she saved was \$100 less than the total amount of money she spent.

(a) What fraction of her money did Wendy spend?

(b) Wendy gave half of her savings to her sister. How much money did Wendy give to her sister?

(a) $\frac{2}{5} + \frac{1}{5} = \frac{3}{5}$

(b) Answer: $\frac{3}{5} \times 500 = 300$

Wendy saved $\rightarrow 500 - 300 = 200$

Wendy gave $\rightarrow 200 \div 2 = 100$

Ans: (a) $\frac{3}{5}$ (b) \$100

