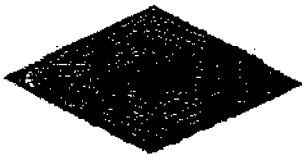
SA1



NANYANG PRIMARY SCHOOL

FIRST SEMESTRAL EXAMINATION 2005

PRIMARY 6

MATHEMATICS

TIME: 2 HOUR 15 MINUTES

Section A

Questions 1 to 5 carry one mark each. Questions 6 to 15 carry two marks each.
For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

(Total: 25 marks)

1. In $y+\frac{y}{2} =$ ☐ x $\frac{1}{2}$, the missing value in the ☐ is

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

(2) $3y$

(3) 3

(4) y^2

2. Rohana went to the bookstore with $80. She spent 15% of the money on books and 40% of the remainder on CDs. How much did she spend on CDs?

(1) $12

(2) $27.20

(3) $32

(4) $40.80

3. What is the maximum number of circles of radius 5 cm that can be cut out from a given rectangle, 20 cm by 15 cm?

(1) 1

(2) 2

(3) 3

(4) 4

4. The average age of Ali, Beng Hin and Chandra is 7 years. Their ages are likely to be:

(1) 3 yr, 1 yr 6 mth, and 2 yr 6 mth

(2) 11 yr 4 mth, 3 yr 6 mth, and 10 yr 2 mth

(3) 10 yr 7 mth, 5 yr, and 5 yr 5 mth

(4) 9 yr 3 mth, 8 yr 10 mth, and 10 yr

5. Subtract 669 from 72 050.
The digit '3' in the answer is in the _____ place.

(1) ones

(2) tens

(3) hundreds

(4) thousands

6. The length and breadth of a rectangle are in the ratio 5 : 4. If the perimeter of the rectangle is 90 cm, find its area.

(1) 500 cm^2

(2) 625 cm^2

(3) 1 800 cm^2

(4) 2 000 cm^2

7. At a fruit stall, for every 3 apples, there are 4 pears, and for every 3 pears, there are 4 oranges. Find the ratio of the number of apples to the number of pears to the number of oranges at the stall.

(1) 3 : 3 : 4

(2) 3 : 4 : 4

(3) 9 : 12 : 16

(4) 9 : 16 : 12

8. A box contains some coloured balls. 48% of the balls are yellow and the rest are either red or blue. The ratio of the number of red balls to the number of blue balls is 5 : 8. If there are 40 blue balls, how many ball are there altogether?

(1) 125

(2) 200

(3) 520

(4) 650

9. Mrs Mani bought some T-shirts for $75. If she was given a discount of 20%, she would be able to buy 3 more of such T-shirts with the same amount of money. What was the usual price of each T-shirt?

(1) $5

(2) $6.25

(3) $18.75

(4) $31.25

10. A motorist travelled a distance of 240 km at an average speed of 60 km/h. On the return journey, he took 2 hours more to travel the same distance. Calculate the average speed for the whole journey.

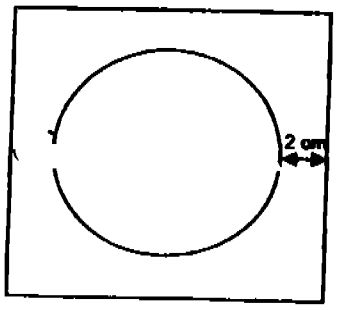
(1) 40 km/h

(2) 48 km/h

(3) 50 km/h

(4) 60 km/h

11. Weilun cuts a circle in the middle of a piece of 10-cm square paper. What is the circumference of the hole? (Take $\pi = 3.14$)



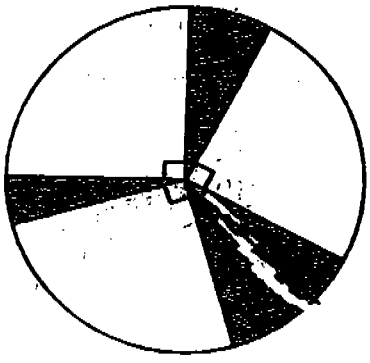
(1) 18.84 cm

(2) 28.26 cm

(3) 31.4 cm

(4) 62.80 cm

12. A circle of radius 3 cm is shaded as shown below. Find the total area of the shaded parts.



(1) $1\frac{1}{2}\pi$ cm^2

(2) $2\frac{1}{4}\pi$ cm^2

(3) $6\frac{3}{4}\pi$ cm^2

(4) 9π cm^2

13. Teck Hai reads $\frac{3}{8}$ of a book in 12 days. At this rate, how many days will it take him to finish reading the rest of the book?

(1) 16 days

(2) 20 days

(3) 32 days

(4) 36 days

14. Twice of a number is greater than $\frac{2}{3}$ of the same number by 48. Find the number.

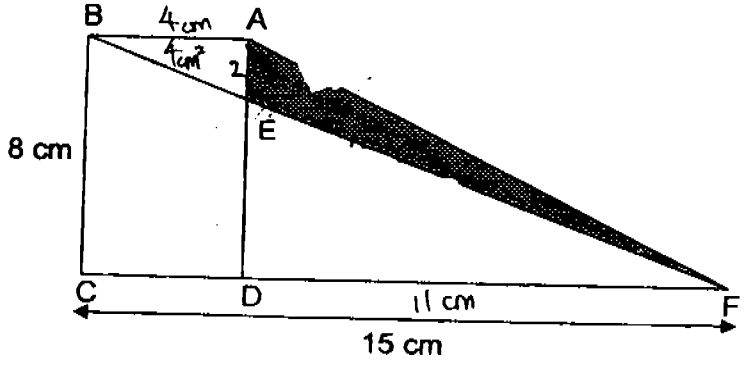
(1) 16

(2) 24

(3) 36

(4) 72

15. In the figure below, rectangle ABCD has an area of 32 cm^2. AE is $\frac{1}{4}$ of AD. Find the area of the shaded part.



(1) 11 cm^2

(2) 22 cm^2

(3) 33 cm^2

(4) 44 cm^2

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Section B

Questions 16 to 35 carry 1 mark each. Write your answers in the spaces provided. Give your answers in the units stated.

(Total: 20 marks)

16. The difference between 2 numbers A and B is 13. When 2 is added to A, the value is twice of B. Find the value of A.

Answer: _____

17. If 12.2 x 1.27 = 15.494, what is the value of 0.122 x 1 270 ?

Answer: _____

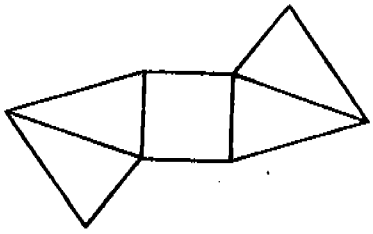
18. Ahmad is $\frac{1}{4}$ as old as Joseph now. In 6 years' time, Ahmad will be $\frac{1}{3}$ as old as Joseph. How old is Ahmad now?

Answer: _____ years old

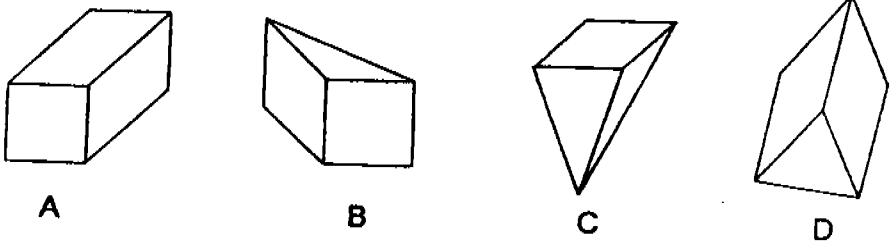
19. Simplify $2a + 3a \times 4 + 5$

Answer: _____

20. The figure below shows the net of a solid.



Which one of the following solids can be formed by the net above?



A B C D

Answer: _____

21. John had $\frac{3}{4}$ as many stickers as David. When John gave some stickers to David, the ratio of the number of John's stickers to the number of David's stickers became 3 : 11. What fraction of John's stickers was given to David? (Given your answer in the simplest form)

Answer: _____

22. Ali mixed 300 *ml* of orange juice and 700 *ml* of water together. After mixing it, he poured out 500 *ml* of the mixture and added 200 *ml* of sprite to it. Find the ratio of the amount of orange juice to the amount of sprite in the new mixture.

Answer: _____

23. A company has 600 employees. 250 of them are men and the rest are women. How many per cent more women than men are there?

Answer: _____%

24. There are 40 pupils in a class. 30% of them are girls. When some girls left the class, the percentage of girls dropped to 20%. How many girls left the class?

Answer: _____

25. Philip's salary is 20% more than Muthu's salary. If their total combined salary is $3 960, what is Philip's salary?

M

Answer: $____

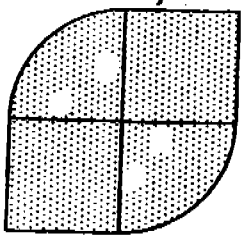
26. Osman cycles 3.5 km in 20 minutes. What is his speed?

Answer: _____ _____km/h

27. A lorry travelled from Town A to Town B at a speed of 50 km/h. A car travelled from Town B to Town A at the speed of 70 km/h. Town A and Town B are 600 km apart. If both vehicles start off at the same time and travel towards each other, how many hours later will the two vehicles meet?

Answer: _____h

28. The figure below is made up of 2 similar squares and 2 similar quadrants of radius 2 cm. What is the area of the figure? (Take $\pi = 3.14$)

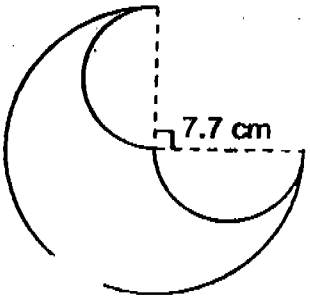


Answer: _____ cm^2

29. The diameter of a wheel is 49 cm. If the wheel makes 20 revolutions, how far has it moved? (Take $\pi = \frac{22}{7}$)

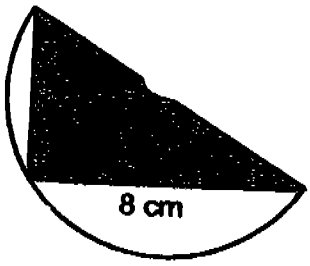
Answer: _____ m

30. The figure below is made up of 2 equal semicircles and an arc of radius 7.7 cm. What is the perimeter of the figure? Leave your answer in terms of π.



Answer: _____ cm

31. The figure below shows a triangle inside a semicircle of diameter 10 cm. Find the area of the unshaded part in terms of π.



Answer: _____ cm^2

32. A machine can cap 250 bottles in 5 minutes. How long will it take to cap 2 800 bottles?

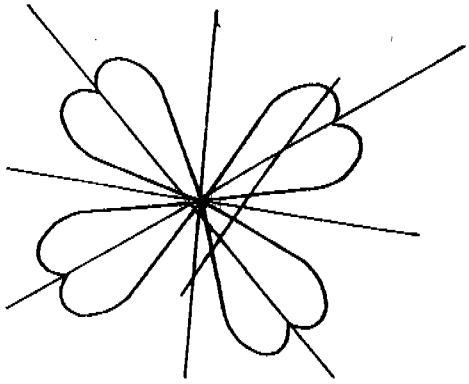
Answer: _____ minutes

33. The table shows Raju's scores in four games. The average score is 76. If the score obtained in Game 1 is twice the score obtained in Game 4, how many points did Raju score in Game 1?

Game	1	2	3	4
Score	?	84	85	?

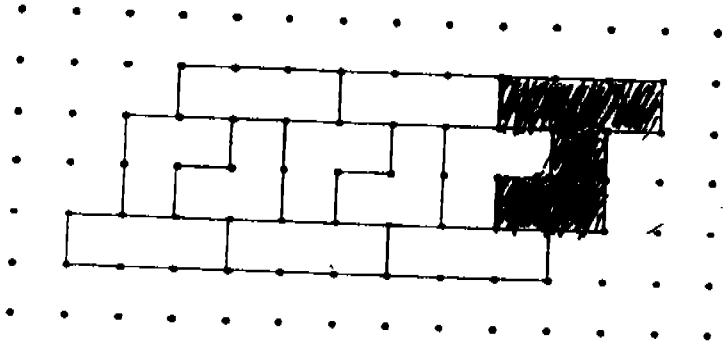
Answer: _____

34. How many lines of symmetry can be drawn in the figure below?



Answer: _____

35. For the tessellation shown below, shade a unit pattern.



40

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Section C

For questions 36 to 50, show your working clearly in the space below each question and write your answers in the space provided.

The number of marks available is shown in brackets [ ] at the end of each question or part-question.

(Total: 55 mark ;)

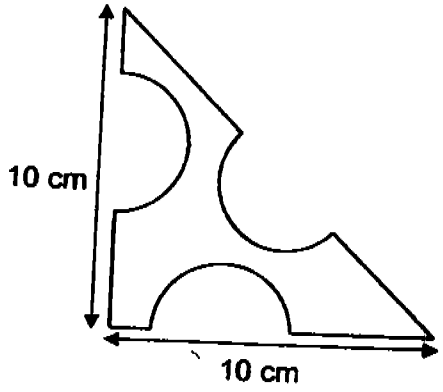
36. Yanni bought a chicken and 3 ducks for $(7w + 9). If the chicken cost $4, what was the price of a duck? Leave your answer in terms of *w*.

Answer: _____ [2]

37. The ratio of the number of men to the number of women at a party is 5 : 7. The ratio of the number of children to the number of adults is 1 : 3. If there are 65 men at the party, how many people are there altogether?

Answer: _____ [2]

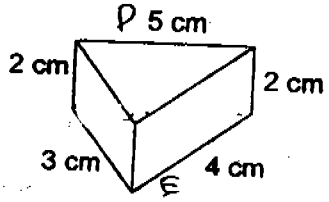
38. The figure below shows 3 equal semicircles of radius 2 cm cut out from a right-angled triangle. Find the area of the figure. (Take $\pi = 3.14$)



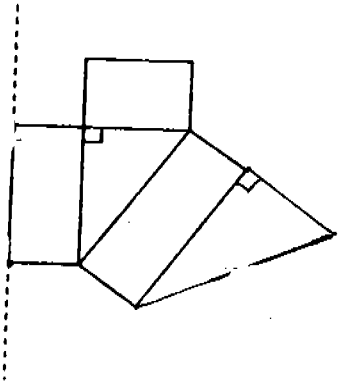
Answer: _____ [2]

39. The figure below shows an incomplete net of a solid Y.

Solid Y



net



a. Complete the net by drawing the missing shape at A. (1m)
b. Find the perimeter of the net. (2m)

Answer: b)_____ [2]

42

40. Entrance tickets to the Singapore Zoological Gardens for an adult are $14 each. The ticket for a child is 50% less. Last Sunday, 40% of the tickets sold were for children. The total sale of the tickets amounted to $6 720. How many of the tickets sold were for adults?

Answer: _____ [3]

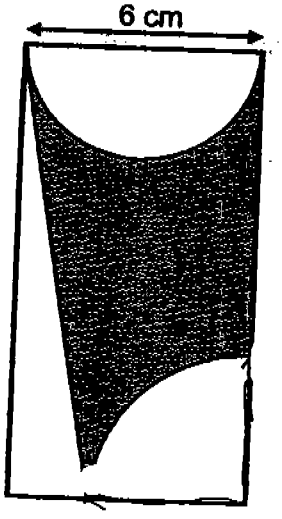
41. Mr Chow took 5 hours to drive from Singapore to Kuala Lumpur. His average speed for the whole journey was 80 km/h. For the first $\frac{3}{4}$ of the journey, he travelled at an average speed of 75 km/h. Find the average speed for the remaining journey.

Answer: _____ [3]

42. Andy, Bill, Chris and Dan scored an average of 69.75 marks in an examination. Andy's score was 80% that of Bill's. Chris scored 10% less than Andy. Dan scored 20% more than Bill. What was Bill's score?

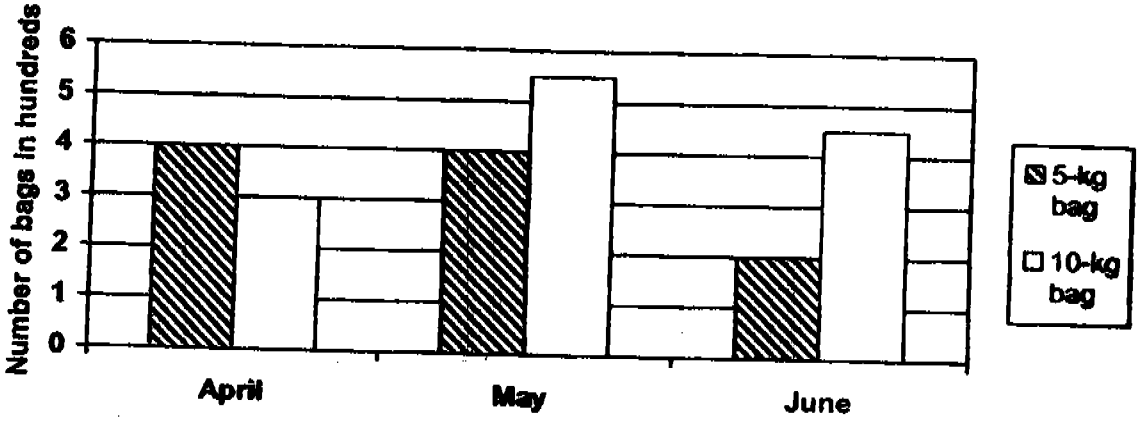
Answer: _____

43. The figure below shows a rectangle in which the length is twice the breadth, a right-angled triangle, a semi-circle and a quadrant of radius 4 cm. What is the area of the shaded part? (Take π =3.14)



Answer: _____

44. The graph below shows the number of 5-kg and 10-kg bags of rice sold by a supermarket in the months of April, May and June. Study it carefully and answer the following questions.



a. In which month was the least amount of rice sold?

b. If each kilogram of rice was sold at $1.25, how much money did the supermarket receive for the 3 months from the sale of the rice?

Answer: a)_____ [2]

b)_____ [2]

45. The table below shows the parking charges of a car park in a shopping centre.

Mon - Fri	Sat and Sun	
8 a.m. – 8 p.m.	8 a.m. – 6 p.m.	6 p.m. – 8 p.m.
\$0.70 for every $\frac{1}{2}$ h or part thereof	First Hour: \$1.20 \$0.50 for every subsequent $\frac{1}{2}$ h or part thereof	Per entry: \$3.00

a. Hassan parked his car at the carpark from 2.45 p.m. to 7.10 p.m. on Friday. How much did he pay for the parking?

b. If Hassan had parked his car for the same duration on Saturday, what would be the difference in the parking charges?

Answer: a)_____ [2]

b)_____ [2]

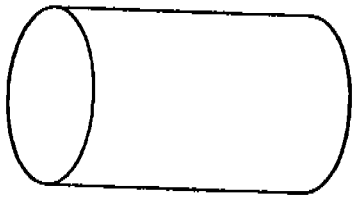
46. John usually takes 10 minutes to walk from his house to his school. If he runs, he can reach his school 4 minutes earlier. His running speed is 52 m/min faster than his walking speed. Find the distance between his school and his house.

Answer: _____ [4]

47. Gary and Hui Ling shared the cost of a present in the ratio 2 : 3. Gary used half of his money to pay for his share. After paying for her share, Hui Ling had $84 left. The ratio of the amount of money that Gary and Hui Ling had before buying the present was 3 : 4. How much did the present cost?

Answer: _____ [5]

48. The solid tin shown below is made up of 3 surfaces. If the length of the tin is 30 cm and the diameter of the circular surface is 14 cm, find the total surface area of the tin. (Take $\pi = \frac{22}{7}$)



Answer: _____ [5]

49. At a car park, 40% of the vehicles are cars. 90% of the remainder are vans and the rest are buses. There are 28 more vans than cars. After some cars have left, 20% of the remaining vehicles at the car park are cars. How many cars are there left at the car park?

Answer: _____ [5]

50. Alex, Bob and Charles have some money. If Alex gives $3.50 to Bob, the two boys will have an equal amount of money. If Bob gives $3.50 to Alex, Alex will have thrice as much money as Bob. Charles' share is the sum of the other 2 boys. How much money do they have altogether?

Answer: _____ [5]

☺ ***End of Paper*** ☺

Please Check Carefully

Setters: Mrs Amy Chow
Mrs Lily Lee

SA1

NANYANG PRIMARY SCHOOL
FIRST SEMESTRAL EXAMINATION 2005
PRIMARY SIX
MATHEMATICS

1) 2

2) 2

3) 2

4) 3

5) 3

6) 1

7) 3

8) 1

9) 2

10) 2

11) 1

12) 2

13) 2

14) 3

15) 1

16) 28

17) 154.94

18) 12

19) 14 a + 5

20) C

21) 1/2

22) 3 : 4

23) 40

24) 5 girls

25) 2160

26) 10.5

27) 5

28) 14.28

29) 30.8

30) 19.25

31) 12.5π

32) 56

33) 90 points

34) 4

35) 5

36) $ $(\frac{7w+5}{3})$

37) 208 people

38) 31.17 cm^2

39) a)

b) 27

40) 360 tickets

41) 100 km/h

42) 75 marks

43) 33.31 cm^2

44) a) April

b) $ 22500

45) a) $ 6.30

b) $ 0.40

46) 780 m

47) $ 180

48) 1628 cm^2

49) 30 cars

50) $ 56