15

卍慈学校

RED SWASTIKA SCHOOL

# RED SWASTIKA SCHOOL

## 2016 SEMESTRAL ASSESSMENT 1

## MATHEMATICS
## PAPER 1

Name : _____ (  )

Class : Primary 6 / _____

Date : 9 May 2016

## BOOKLET A

15 Questions
20 Marks
Duration of Paper 1 (Booklets A & B): 50 minutes

**Note:**

1. Do not open this Booklet until you are told to do so.
2. Read carefully the instructions given at the beginning of each part of the Booklet.
3. Do not waste time. If a question is difficult for you, go on to the next one.
4. Check your answers thoroughly and make sure you attempt every question.
5. In this booklet, you should have the following:
   (a) Page 1 to Page 5
   (b) Questions 1 to 15
6. You are not allowed to use a calculator.

Questions 1 to 10 carry 1 mark each. Questions 11 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). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet. (20 marks)

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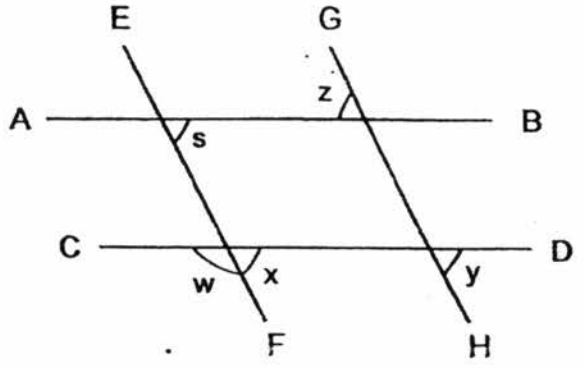
1 Simplify $6y + 16 - 2y + 4$.

(1) $4y + 12$
(2) $4y - 20$
(3) $4y + 20$
(4) $8y + 20$

2 In the figure below, AB is parallel to CD and EF is parallel to GH. Which angle is not equal to $\angle s$?




(1) $\angle w$
(2) $\angle x$
(3) $\angle y$
(4) $\angle z$

3 How many eighths are there in $2\frac{3}{4}$?

(1) 9
(2) 11
(3) 16
(4) 22

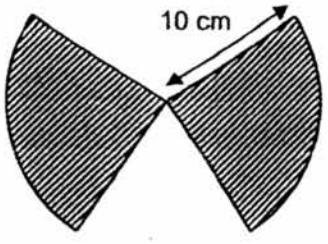
4 Express 30 cm as a percentage of 120 cm.

(1) 25%
(2) 36%
(3) 40%
(4) 400%

5 At 7 a.m, a van started travelling from Town A to Town B at a speed of 60 km/h. It reached Town B at 10 a.m. Find the distance between Town A and Town B.

(1) 20 km
(2) 60 km
(3) 180 km
(4) 240 km

6 The figure below is made up of 2 identical quadrants. What is the perimeter of the figure? Leave your answer in terms of $\pi$.

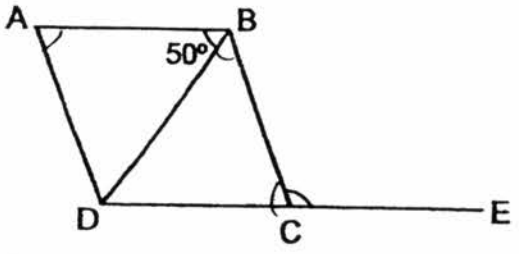



(1) $(5\pi + 40)$ cm
(2) $(10\pi + 20)$ cm
(3) $(10\pi + 40)$ cm
(4) $(20\pi + 40)$ cm

7 If A : C = 5 : 3 and B : C = 3 : 4, what is the ratio of A : B?

(1) 5 : 3
(2) 9 : 12
(3) 9 : 20
(4) 20 : 9

8 In the figure below, ABCD is a rhombus and DCE is a straight line. Find ∠BCE.

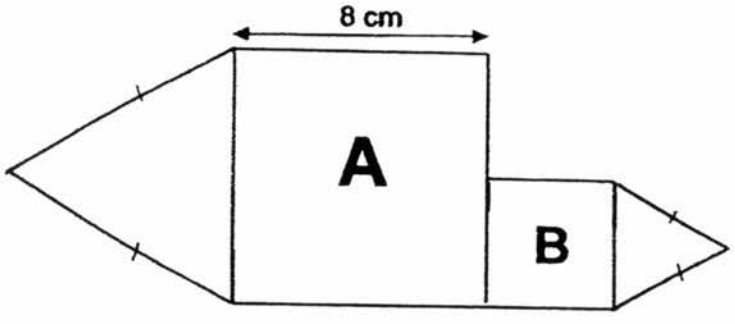



(1) 50°
(2) 80°
(3) 100°
(4) 120°

9 Ali jogged $\frac{3}{5}$ of the journey from his house to the stadium at a speed of 15 km/h for 2 hours. Ali took 5 hours to complete the whole journey. What was his average speed for the whole journey?

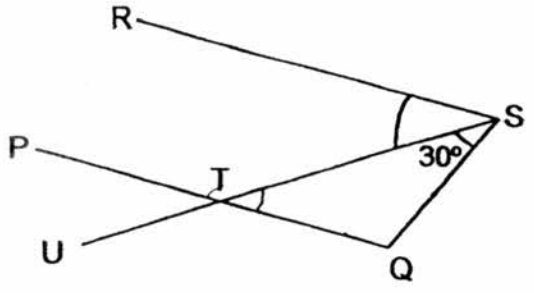
(1) 30 km/h
(2) 10 km/h
(3) 6 km/h
(4) 4 km/h

10 The figure below is made up of two squares and two equilateral triangles. The length of Square A is twice the length of Square B. Find the perimeter of the figure.




(1) 48 cm
(2) 52 cm
(3) 56 cm
(4) 84 cm

11 In the figure below, PTQ and UTS are straight lines. PQ is parallel to RS and QT = QS. Find ∠RST.




(1) 30°
(2) 60°
(3) 120°
(4) 150°

12 The ratio of the number of pens to the number of rulers was 7 : 4. After half of the rulers were sold, there were 108 pens and rulers left. How many rulers were there at first?

(1) 12
(2) 24
(3) 48
(4) 84

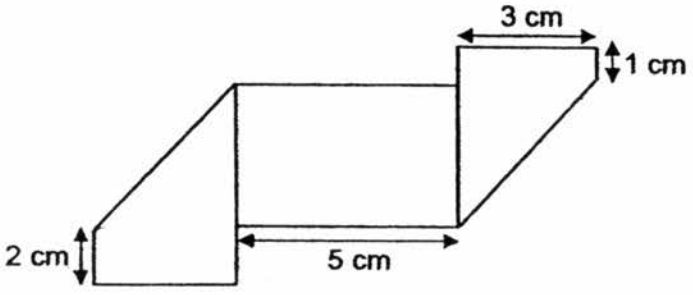
13 Daisy and Kenny met each other in the library on 2nd May. Daisy goes to the library every 2 days while Kenny goes there every 3 days. When will they next meet in the library again?

(1) 6th May
(2) 8th May
(3) 10th May
(4) 14th May

14 Mrs Lee spent \$15 on a bag and had \$60 left. What percentage of her money did she spend on the bag?

(1) 20%
(2) 25%
(3) 60%
(4) 80%

15 A rectangular piece of paper was folded at both ends to form the shape below. Find the perimeter of the rectangular piece of paper.




(1) 16 cm
(2) 28 cm
(3) 32 cm
(4) 34 cm

RED SWASTIKA SCHOOL

# RED SWASTIKA SCHOOL

## 2016 SEMESTRAL ASSESSMENT 1

## MATHEMATICS
## PAPER 1

Name : _____ (  )

Class : Primary 6 / _____

Date : 9 May 2016

## BOOKLET B

15 Questions
20 Marks

In this booklet, you should have the following:
(a) Page 6 to Page 12
(b) Questions 16 to 30

MARKS

| | OBTAINED | POSSIBLE |
|---|---|---|
| BOOKLET A | | 20 |
| BOOKLET B | | 20 |
| TOTAL | | 40 |

Parent's Signature : _____

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

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**16** Find the value of $\frac{6b+6}{3} - b$ when $b = 5$.

Ans: _____

---

**17** If $\frac{3}{8}$ of a number is 24, what is $\frac{1}{2}$ of the number?

Ans: _____

---

**18** Find the value of $90 + 54 \div 9 - 10 \times 2$.

Ans: _____

---

3

19 Write $5\frac{7}{9}$ as a decimal correct to 2 decimal place.

Ans: _____

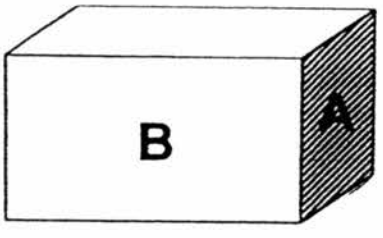
---

20 Miss Sim had as many red markers as blue markers. She lost $\frac{1}{4}$ of her red markers and $\frac{2}{3}$ of her blue markers. What fraction of her markers had she left?

Ans: _____

---

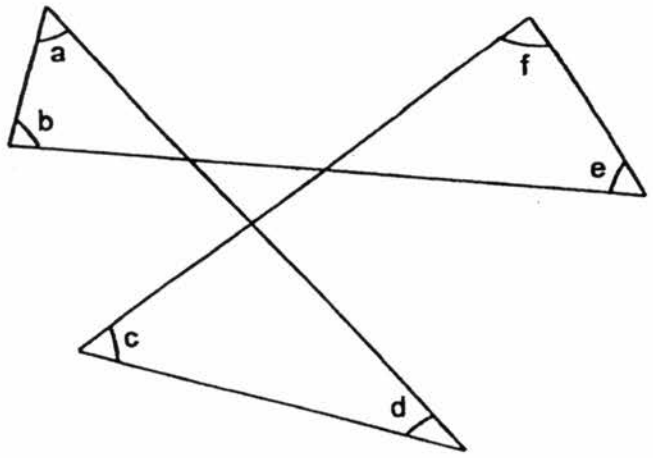
21 The cuboid below has a volume of 360 $cm^3$. The shaded area A is a square of 36 $cm^2$. What is the area of B?




Ans: _____ $cm^2$

---

22 Find the sum of $\angle a$, $\angle b$, $\angle c$, $\angle d$, $\angle e$ and $\angle f$.




Ans: _____ °

---

23 There were some girls, boys and women in a park. $\frac{2}{3}$ of the people were girls. The ratio of the number of boys to the number of women was 2 : 1. If there were 12 more girls than boys, how many women were there in the park?

Ans: _____

---

2

24 The table below shows the postage charges for sending parcels.

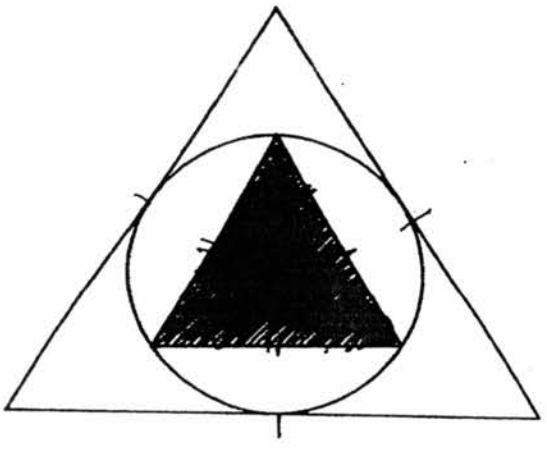
| | |
|---|---|
| For the first 100 g | $4.00 |
| For every additional 20 g or part thereof | $1.20 |

Peter sent a parcel weighing 250 g. How much postage charges did he pay?

Ans: $ _____

---

25 In the figure below, the circle touches each of the two equilateral triangles. What fraction of the figure is shaded?



Ans: _____

---



2

Questions 26 to 30 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

**(10 marks)**

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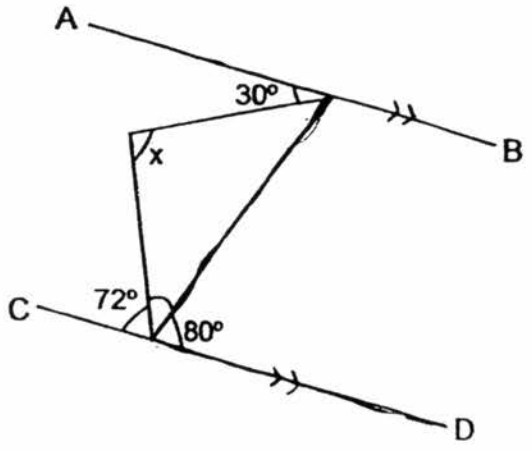
**26** In the figure below, AB and CD are parallel lines. Find $\angle x$.




Ans: _____ °

---

**27** The usual price of a vacuum cleaner was \$1 000. Mrs Wong bought it during the Electronics Fair and was given a 40% discount. She had to pay an additional 7% GST on the discounted price. How much did Mrs Wong pay for the vacuum cleaner?

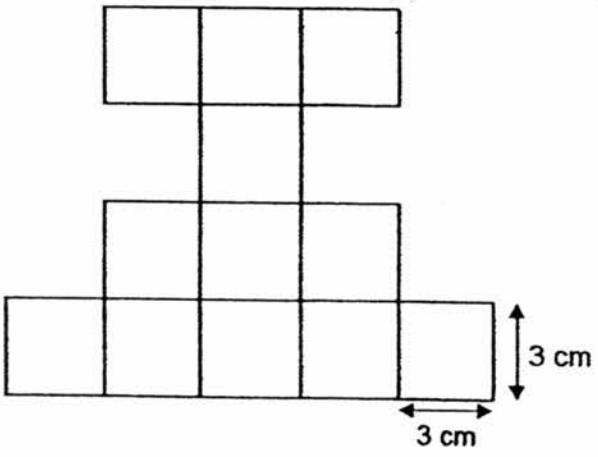
Ans: \$ _____

---



4

28 The figure below is made up of 12 identical squares of side 3 cm. Rearrange all the squares to form a rectangle which has the largest possible perimeter. What is the perimeter of the rectangle?




Ans: _____ cm

---

29 Randy and Samy drove from City X to City Y. The distance between the two cities was 360 km. Randy left City X 10 minutes after Samy, but arrived at City Y 20 minutes before him. Samy's average speed was 80 km/h. Find Randy's average speed for the whole journey.

Ans: _____ km/h

---

4

30 On Day 1, John read $\frac{2}{5}$ of a book. The next day, he read $\frac{7}{9}$ of the remaining pages. On Day 3, he finished reading the last 70 pages. How many pages were there in the book?

Ans: _____

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**END OF PAPER 1**

2

# RED SWASTIKA SCHOOL

## 2016 SEMESTRAL ASSESSMENT 1

## MATHEMATICS
## PAPER 2

Name : _____ (  )

Class : Primary 6 / _____

Date : 9 May 2016

18 Questions
60 Marks
Duration of Paper 2: 1 hour 40 minutes

Note:
1. Do not open this Booklet until you are told to do so.
2. Read carefully the instructions given at the beginning of each part of the Booklet.
3. Do not waste time. If a question is difficult for you, go on to the next one.
4. Check your answers thoroughly and make sure you attempt every question.
5. In this paper, you should have the following:
   (a) Page 1 to Page 14
   (b) Questions 1 to 18
6. You are allowed to use a calculator.

MARKS

| | OBTAINED | POSSIBLE |
|---|---|---|
| PAPER 1 | | 40 |
| PAPER 2 | | 60 |
| TOTAL | | 100 |

Parent's Signature : _____

Questions 1 to 5 carry 2 marks each. Show your working clearly in the space below each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

---

1 Amy, Bernice and Clarice shared the cost of a meal equally. Amy did not bring her wallet so Bernice and Clarice paid for the meal first in the ratio of 4 : 5. If Amy returned $30 to Clarice the next day, how much must she return to Bernice?

Ans: $ _____

---

2 The figure below is made up of 2 identical quadrants and 2 identical semi-circles. Find the area of the shaded parts. (Take $\pi = \frac{22}{7}$)


Ans: _____ $cm^2$

---



4

3 The length of a rectangle is twice its breadth. If the length is increased by 20% and the breadth is decreased by 20%, express the area of the new rectangle as a percentage of the area of the original rectangle.

Ans: _____ %

---

4 Mr Tan is $p$ years older than his daughter. Four years later, his daughter is half of Mr Tan's age. How old is Mr Tan now in terms of $p$?

Ans: _____

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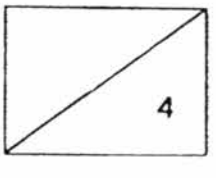

5 A box contained two-dollar notes and five-dollar notes. There were 250 more two-dollar notes than five-dollar notes and the total amount of money in the box was $3 160. How many five-dollar notes were there in the box?

Ans: _____

2

For Questions 6 to 18, show your working clearly in the space below each question 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. (50 marks)

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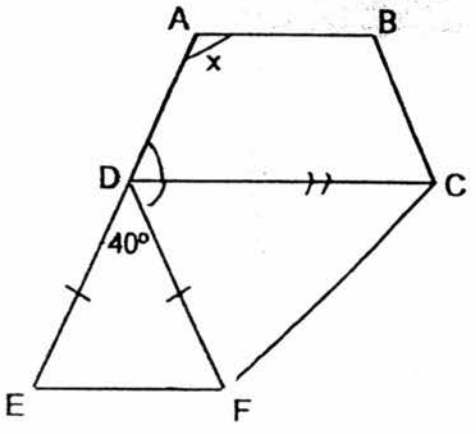
6 In the figure below, ABCD is a trapezium and DEF is an isosceles triangle. ADE is a straight line and CD is parallel to EF. Find $\angle x$.




Ans: _____ [3]

---

7 A fruit seller had some red and green apples. Next, he bought another 15 red apples and the ratio of the number of red apples to the number of green apples became 2 : 3. Then, he bought another 42 green apples and the ratio of the number of red apples to the number of green apples became 1 : 3. How many apples did the fruit seller have at first?

Ans: _____ [3]

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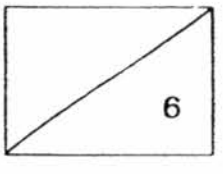
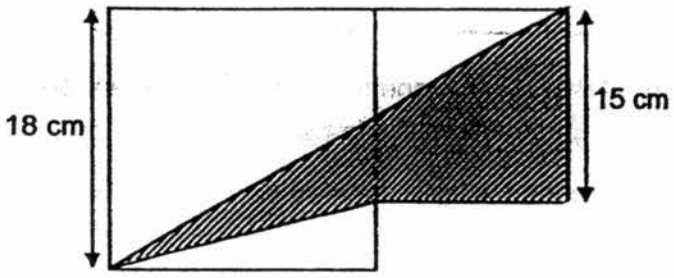


8 The figure below is made up of two squares. Find the area of the shaded part.

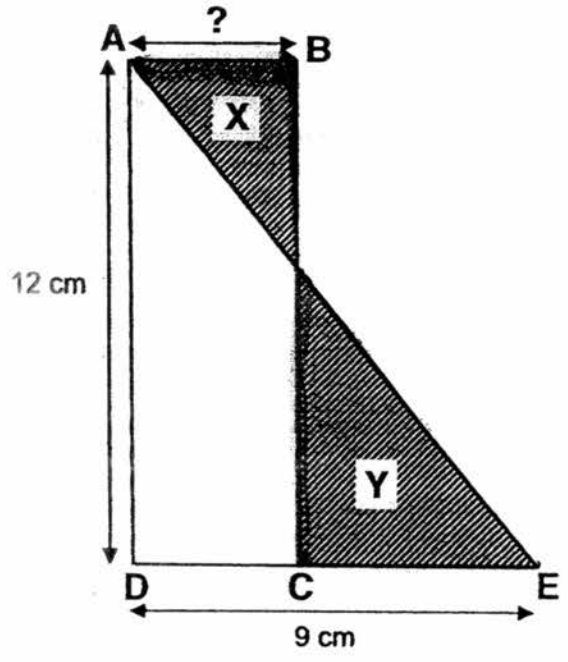



Ans: _____ [3]



3

9 The figure below is made up of Rectangle ABCD and Triangle AED. Shaded part X is 12 $cm^2$ smaller than shaded part Y. What is the length of AB?




Ans: _____ [3]



3

10 At first, James had $320 more than Tom. James then gave 60% of his money to Tom. After that, Tom had $544 more than James. How much money did Tom have at first?

Ans: _____ [3]

---

11 Bob and Dewei had to paint a house. Bob could paint twice as fast as Dewei. They would take a total of 12 hours to paint the entire house together. How long would Bob take if he was to paint the house by himself?

Ans: _____ [3]

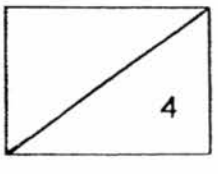
---

6

12 Sally had some stickers. She lost $\frac{2}{3}$ of them and gave $\frac{1}{4}$ of the remainder to Paul. After that, her brother gave her another 120 stickers. The ratio of the number of stickers she had at first to the number of stickers she had in the end was 4 : 3. How many stickers did Sally have in the end?

Ans: _____ [4]





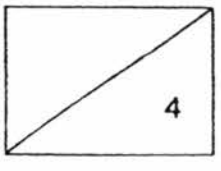
13 Miss Lim had 3 624 red, yellow and blue sweets. The number of red sweets and yellow sweets that Miss Lim had was the same. After giving away some yellow sweets and blue sweets to her students, she had $\frac{5}{7}$ of the yellow sweets and $\frac{3}{5}$ of the blue sweets left. There was a total of 3 024 sweets left. How many blue sweets did Miss Lim have at first?

Ans: _____ [4]

14 Michael participated in a Mathematics Competition. There was a total of 35 questions. For each correct answer, 3 marks were awarded. For each wrong answer, 2 marks were deducted. For each question left blank, 1 mark was deducted. Michael did not answer 5 questions and scored a total of 70 marks. How many questions did he answer correctly?

Ans: _____ [4]

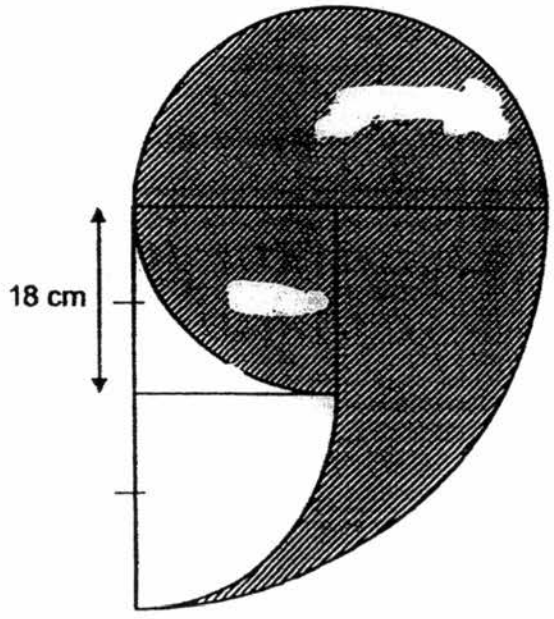




15 The figure below is made up of a semi-circle, a square and 3 quadrants. The side of the square is 18 cm.

(a) Find the area of the shaded parts. (Take $\pi = 3.14$)

(b) Find the perimeter of the shaded parts. (Take $\pi = 3.14$)




Ans: (a) _____ [3]

(b) _____ [2]

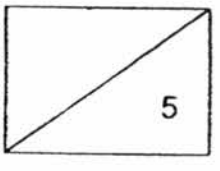


5

16 Aaron was given a monthly allowance of $250 in 2015. He spent 30% of his allowance on food, 20% of it on transport and saved the rest. In 2016, there was an increase in his monthly allowance. He spent the same amount of money on transport but increased his spending on food by $43. The remaining 40% of his allowance was saved. What was the percentage increase in his allowance?

Ans: _____ [5]





17 Jeremy and Benjamin started cycling along the same path from Point Z but in opposite direction. After cycling for $\frac{3}{4}$ h, they were 72 km apart. Jeremy's speed was 16 km/h slower than Benjamin.

(a) What was Jeremy's average speed?

(b) If Benjamin continued to cycle for another $\frac{1}{2}$ h, find the total distance covered by him.

Ans: (a) _____ [3]

(b) _____ [2]



5

18 Miss Lee had a certain number of muffins and cupcakes in her shop. If Miss Lee sold 60 muffins and 30 cupcakes each day, she would have 300 muffins left by the time she finished selling all her cupcakes. If Miss Lee sold 30 muffins and 60 cupcakes each day, Miss Lee would have 930 muffins left by the time she finished selling all her cupcakes. Find the total number of muffins and cupcakes Miss Lee had in her shop.

Ans: _____ [5]

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**END OF PAPER 2**



5

YEAR : **2016**
LEVEL : **PRIMARY 6**
SCHOOL : **RED SWASTIKA**
SUBJECT : **MATHEMATICS**
TERM : **SA1**

Paper 1

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Q1** | 3 | **Q4** | 1 | **Q7** | 4 | **Q10** | 2 | **Q13** | 2 |
| **Q2** | 1 | **Q5** | 3 | **Q8** | 3 | **Q11** | 1 | **Q14** | 1 |
| **Q3** | 4 | **Q6** | 3 | **Q9** | 2 | **Q12** | 3 | **Q15** | 4 |

**Q16** $12 - 5 = \underline{7}$

**Q17** $24 \div 3 = 8$
$8 \times 4 = \underline{32}$

**Q18** 76

**Q19** $5 \times 9 = 45$
$45 + 7 = 52$
$52 \div 9 = \underline{5.78}$

**Q20** $\frac{13}{24}$

**Q21** $\sqrt{36} = 6$ cm
$360 \div 6 \div 6 = 10$
$10 \times 6 = \underline{60 \text{ cm}^2}$

**Q22** $180° \times 3 = 540°$
$540° - 180° = \underline{360°}$

**Q23** $6 - 2 = 4$
$4u \rightarrow 12$
$1u \Rightarrow \underline{3 \text{ women}}$

**Q24** $250 \text{ g} - 100 \text{ g} = 150 \text{ g}$
$150 \text{ g} \div 20 \text{ g} = 7\text{R}10$
$7 + 1 = 8$
$\$1.20 \times 8 = \$9.60$
$\$4 + \$9.60 = \underline{\$13.60}$

**Q25** $\frac{1}{4}$

**Q26** $180° - 80° - 72° = 28°$
$80° - 30° = 50°$
$180° - 50° - 28° = \underline{102°}$

**Q27** $\frac{60}{100} \times \$1000 = \$600$
$\frac{107}{100} \times \$600 = \underline{\$642}$

**Q28** $26 \times 3 \text{ cm} = \underline{78 \text{ cm}}$

**Q29** $360 \text{ km} \div 80 \text{ km/h} = 4\frac{1}{2} \text{ h}$
$4\frac{1}{2} \text{ h} - \frac{1}{2} \text{ h} = 4 \text{ h}$
$360 \text{ km} \div 4 \text{ h} = \underline{90 \text{ km/h}}$

**Q30** $2u \rightarrow 70$
$1u \rightarrow 35$
$15u \Rightarrow \underline{525 \text{ pages}}$

Paper 2

**Q1**

| A | : | B | : | C | : | T |
|---|---|---|---|---|---|---|
| 0 | : | 4 | : | 5 | : | 09 |

$9 \div 3 = 3$
$5 - 3 = 2$
$2u \rightarrow \$30$
$1u \Rightarrow \underline{\$15}$

**Q2** $(\frac{22}{7} \times 28 \times 28) \div 4 = 616$
$(\frac{22}{7} \times 14 \times 14) \div 2 = 308$
$616 - 308 = 308$
$28 \times 28 = 784$
$784 - 616 = 168$
$(\frac{22}{7} \times 14 \times 14) \div 4 = 154$
$154 + 168 + 308 = \underline{630 \text{ cm}^2}$

**Q3** Length $\rightarrow 20u$
New length $= \frac{120}{100} \times 20u \rightarrow 24u$
Breadth $\rightarrow 10u$
New breadth $= \frac{80}{100} \times 10u \rightarrow 8u$
Old area $= 20u \times 10u \rightarrow 200u^2$
New area $= 24 \times 8 \rightarrow 192u^2$
$\frac{192}{200} u^2 \times 100\% \Rightarrow \underline{96\%}$

**Q4** $2 \times p \rightarrow 2p$
$2p - 4 \Rightarrow \underline{2p - 4}$

Q5 $250 \times \$2 = \$100$
$\$3160 - \$500 = \$2660$
$\$2 + \$5 = \$7$
$\$2660 \div \$7 = \underline{380 \text{ five-dollar notes}}$

Q6 $(180° - 40°) \div 2 = 70°$
$180° - 40° - 70° = 70°$
$180° - 70° = \underline{110°}$

Q7 55 apples

Q8 $18 + 15 = 33$
$A \rightarrow \frac{1}{2} \times 33 \times 18 = 297$
$18 \text{ cm} - 15 \text{ cm} = 3 \text{ cm}$
$B \rightarrow \frac{1}{2} \times 18 \times 3 = 27$
$(18 \times 18) + (15 \times 15) = 549$
$549 - 297 - 27 = \underline{225 \text{ cm}^2}$

Q9 $\frac{1}{2} \times 12 \times 9 = 54$
$54 - 12 = 42$
$42 \div 12 = \underline{3.5 \text{ cm}}$

Q10 $120\% \rightarrow (\$128 + \$544) - \$192 = \$480$
$1\% \rightarrow 4$
$100\% \Rightarrow \underline{\$400}$

Q11 $12 \times 3 = 36$
$36 \div 2 = \underline{18 \text{ hours}}$

Q12 $(4 : 3) \times 3$
$12 : 9$
$9 - 3 = 6$
$6u \rightarrow 120$
$1u \rightarrow 20$
$9u \Rightarrow \underline{180 \text{ stickers}}$

Q13 Sweets given away $\rightarrow 600$
$2u \text{ Y} + 2u \text{ B} \rightarrow 600$
$1u \text{ Y} + 1u \text{ B} \rightarrow 300$
$9u \rightarrow 3624 - 1500 = 2124$
$1u \rightarrow 236$
$14u \rightarrow 236 \times 14 = 3304 \text{ (Y + R)}$
$3624 - 3304 \Rightarrow \underline{320 \text{ blue sweets}}$

**Q14** $35 - 5 = 30$
$70 + 5 = 75$
$3 \times 30 = 90$
$90 - 75 = 15$
$3 + 2 = 5$
$15 \div 5 = 3$ (wrong) $\Rightarrow 30 - 3 =$ <u>27 questions</u>

**Q15a** Area of $\frac{3}{4}$ circle $= \frac{3}{4} \times (3.14 \times 18 \times 18) \rightarrow 763.02$
Area of small quadrant $= \frac{1}{4} \times (3.14 \times 18 \times 18) \rightarrow 254.34$
Area of big quadrant $= \frac{1}{4} \times (3.14 \times 36 \times 36) \rightarrow 1017.36$
Area of square $= 18 \times 18 \rightarrow 324$
Shaded parts $= 763.02 + (1017.36 - 324 - 254.34) \Rightarrow$ <u>1202.04 cm$^2$</u>

**Q15b** $\frac{3}{4} \times (3.14 \times 36) \rightarrow 84.78$
$\frac{1}{4} \times (3.14 \times 36) \rightarrow 28.26$
$\frac{1}{4} \times (3.14 \times 72) \rightarrow 56.52$
$84.78 + 28.26 + 56.52 \Rightarrow$ <u>169.56 cm</u>

**Q16** $\frac{30}{100} \times \$250 \rightarrow \$75$
$\frac{20}{100} \times \$250 \rightarrow \$50$
$\$50 + \$43 = \$93$
$60\% \rightarrow \$93 + \$75 = \$168$
$1\% \rightarrow \$2.80$ , $100\% \rightarrow \$280$
$\$280 - \$250 = \$30$
$\frac{30}{250} \times 100\% \Rightarrow$ <u>12%</u>

**Q17a** $16 \text{ km/h} \times \frac{3}{4} \text{ h} = 12 \text{ km}$
$72 \text{ km} + 12 \text{ km} = 84 \text{ km}$
$84 \text{ km} \div 2 = 42 \text{ km}$
$42 \text{ km} - 12 \text{ km} = 30 \text{ km}$
$30 \text{ km} \div \frac{3}{4} \text{ h} =$ <u>40 km/h</u>

**Q17b** $\frac{3}{4} \text{h} + \frac{1}{2} \text{h} = 1\frac{1}{4} \text{h}$
$40 + 16 = 56$
$1\frac{1}{4} \text{ h} \times 56 \text{ km/h} =$ <u>70 km</u>

**Q18** $30u = 60p$ , $1u = 2p$
$60u + 300 = 30p + 930$
$120p + 300 = 30p + 930$
$120p - 30p = 930 - 300$
$90p = 630 \rightarrow 1p = 7$
$90p + 930$
$(90 \times 7) + 930 =$ <u>1560 altogether</u>

End