Rosyth School
First Continual Assessment 2012
Primary 6 Mathematics

Name:_____ Register No. _____

Class: Pr 6 -_____

Date: 1st March 2012 Parent's Signature: _____

Total Time for Booklets A and B : 50 min

PAPER 1
(Booklet A)

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. Shade your answers in the Optical Answer Sheet (OAS) provided.
4. You are **not** allowed to use a calculator
5. Answer all questions.

Section	Maximum Mark	Marks Obtained
Paper 1 (Booklet A)	20	

*** This booklet consists of 6 pages (excluding this cover page)**

Booklet A

Question 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 and 4). Shade the correct answer on the OAS (Optical Answer Sheet).

(20 marks)

1. Which of the following is two hundred and two thousand one hundred and eighteen in figures?

   (1) 2 018

   (2) 22 118

   (3) 202 118

   (4) 220 118

2. An apple costs y cents. An orange costs 20 cents more.
   Alan wants to buy 2 apples and 4 oranges.
   How much must he pay for them?

   (1) $(4y + 20)$ cents

   (2) $(4y + 80)$ cents

   (3) $(6y + 20)$ cents

   (4) $(6y + 80)$ cents

3. Simplify $9p - 4p + 7 - p + 5$

   (1) $4p + 2$

   (2) $4p + 12$

   (3) $5p + 2$

   (4) $5p + 12$

4. Which of the following shows 13 sixths?

(1) $\frac{6}{13}$

(2) $2\frac{1}{6}$

(3) $6\frac{1}{13}$

(4) $13\frac{1}{6}$

5. Brenda took out 35 marbles out of a box and there were 15 marbles left.
What fraction of the marbles did she take out of the box?

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

(2) $\frac{3}{7}$

(3) $\frac{7}{10}$

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

6. The area of a rectangle is (12d) cm^2. If its breadth is 4 cm long, find its perimeter.

(1) (3d) cm

(2) (3d + 4) cm

(3) (6d + 8) cm

(4) $(\frac{12d}{8})$ cm

7. In a class of 41 pupils, 17 of them are girls.
What is the ratio of the number of boys to the total number of pupils?

(1) 17 : 24

(2) 17 : 41

(3) 24 : 17

(4) 24 : 41

8. Dilla mixed 3 eggs with every 2 cups of flour to make a pancake batter.
Using the same proportion, how many eggs did she use to mix with 18 cups of flour?

(1) 6

(2) 9

(3) 27

(4) 54

9. The length of a rectangular room is 21 m.
The ratio of its width to its length is 3 : 7. What is the area of the room?

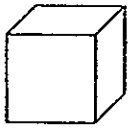
(1) 63 m^2

(2) 147 m^2

(3) 189 m^2

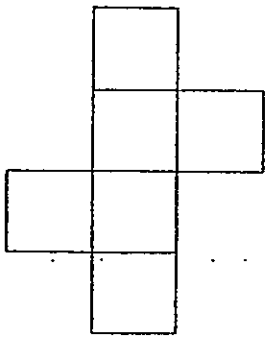
(4) 210 m^2

10. The figure below shows a cube.

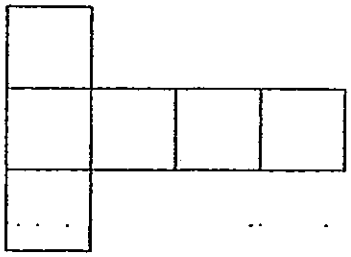


Which one of the following is not a net of the cube?

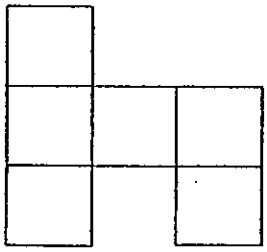
(1)



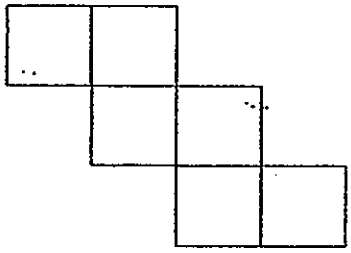
(2)



(3)



(4)



11. Gina packed $\frac{1}{6}$ kg of flour into each container. She had $\frac{5}{6}$ kg of flour altogether. How many such containers did she pack?

(1) $\frac{5}{36}$

(2) 5

(3) $4\frac{1}{6}$

(4) 4

12. Chandra had some amount of money.
She spent $\frac{1}{4}$ of it on a blouse and $\frac{2}{5}$ of the remainder on a bag.
She saved the rest. What fraction of her money did she save?

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

(2) $\frac{9}{20}$

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

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

13. In the school hall, $\frac{1}{3}$ of the number of boys is equal to $\frac{3}{5}$ of the number girls.
If there were 180 more boys than girls, how pupils were there altogether?

(1) 225

(2) 280

(3) 405

(4) 630

14. Ernie and Fandi shared a sum of money in the ratio of 5 : 9.
After Fandi spent $36 on a pair of jeans, they had the same amount of money.
What is the total amount of money they had in the end?

(1) $40

(2) $81

(3) $90

(4) $162

15. Shawn had enough money to buy either 8 pens or 12 pencils.
He decided to spend all his money on these 2 items.
If he bought 6 pens, how many pencils did he buy?

(1) 6

(2) 9

(3) 3

(4) 16

Rosyth School
First Continual Assessment 2012
Primary 6 Mathematics

Name:_____ Register No.

Class: Pr 6 -_____

Date: 1st March 2012 Parent's Signature:

Total Time for Booklets A and B : 50 min

PAPER 1
(Booklet B)

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. You are **not** allowed to use a calculator
4. Answer all questions.

Section	Maximum Mark	Marks Obtained
Paper 1 (Booklet B)	20	

*** This booklet consists of 5 pages (excluding this cover page)**

Booklet B

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)

16. Round off 739 910 to the nearest thousand.

Ans: _____

17. If $y = 3$, find the value of $\frac{y + 5y}{8}$

Ans: _____

18. Express 30 minutes as a fraction of 4 h.

Ans: _____

19. The average of three numbers is 50.
If the total of two of the numbers is 47, what is the value of the third number?

Ans: _____

20. Mary is $\frac{3}{5}$ as tall as Jane.
What is the ratio of Jane's height to Mary's height?

Ans:_____

21. Red and yellow markers are placed along a jogging track.
A yellow marker is placed after every sixth red marker.
If there are 42 markers altogether, how many yellow markers are there?

Ans:_____

22. $\frac{4}{9}$ of the money collected from a charity drive was divided among 8 organisations. What fraction of the money did each organisation receive?

Ans:_____

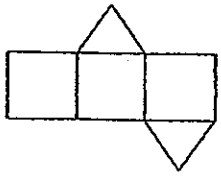
23. Ismail had \$17b. His mother gave him another \$4b. He spent the same amount of money in four days and had \$2b left. Express the amount of money he spent each day in terms of b.

Ans: \$_____

24. Lisa is $(3h + 9)$ years old. Her brother is $2h$ years older than her. What was their total age 4 years ago?

Ans: _____

25. The figure below shows the net of a solid. What is the solid?



Ans: _____

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)

26. Pooja had 38 stamps at first.
After Pooja and her sister each received 7 stamps from their father, Pooja ended up with five times as many stamps as her sister.
How many stamps did her sister have at first?

Ans:_____

27. Randy has \$5 notes and \$10 notes which add up to \$255. If he has 13 \$5 notes, how many \$10 notes does he have?

Ans:_____

28. Mr Jaya had some mollies and guppies in his shop in the ratio of 5 : 6. He sold 28 mollies and the ratio of mollies to guppies became 1 : 4.
How many mollies did he have at first?

Ans:_____

29. Nina and Owen had a total $320.

After Nina had given $\frac{1}{5}$ of her money to Owen, they now had the same amount of money.
How much did Owen have at first?

Ans: $\$$ _____

---

30. At a Bird Show, $\frac{2}{3}$ of the audience were children.

The number of boys was $\frac{2}{5}$ the number of girls.
If there were ~~36~~ 30 girls, how many adults are there at the show?

Ans: _____

Rosyth School
First Continual Assessment 2012
Primary 6 Mathematics

Name:_____ Register No_____

Class: Pr 6 _____

Date: 1st March 2012 Parent's Signature:_____

Time: 1 h 40 min

PAPER 2

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. Show your workings clearly as marks are awarded for correct working.
5. Write your answers in this booklet.
6. You are allowed to use a calculator

Questions	Maximum Mark	Marks Obtained
Q 1 to 5	10	
Q 6 to 18	50	

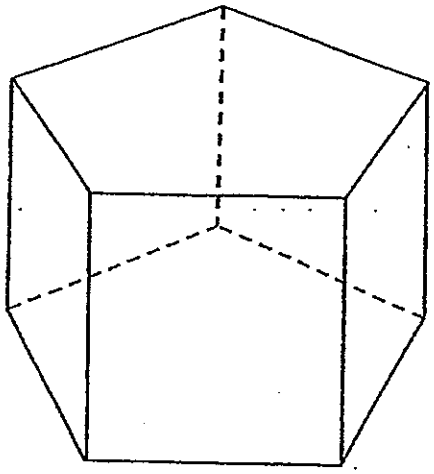
Section	Maximum Mark	Marks Obtained
Paper 1	40	
Paper 2	60	
Total	100	

*** This booklet consists of 14 pages (including this cover page)**

Questions 1 to 5 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)

1 How many faces does the figure below have?



Ans: _____

2 Joe started saving money on a Tuesday with $2.
He saved $2 every day since then.
On which day would he have saved $192?

Ans: _____

(Go on to the next page)

3 $1\frac{1}{4}$ m of ribbon is cut into shorter pieces.

Each of the shorter piece is $\frac{1}{3}$ m.

What is the length of the remaining piece?
(Give your answer in the simplest form.)

Ans:_____ m

4 The ratio of the perimeter of an equilateral triangle to the perimeter of a square is 2 : 3. The perimeter of square is 36 cm. What is the length of one side of the triangle?

Ans:_____ cm

(Go on to the next page)

5 There are some people in a cinema.

$\frac{3}{7}$ of them are men and the rest are women and children.

There are $\frac{3}{5}$ as many women as children.

What is the ratio of the number of men to the number of children in the cinema?

Ans:

(Go on to the next page)

Questions 6 to 18, show your working clearly in the space provided for 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)

6 Mrs Wong ~~gave~~ divided $\$y$ equally ~~to~~ between her two children, John and Kathy.

(a) John spent \$178 and saved the rest of it.
Find the amount of money John saved in terms of y.

(b) If $y = \$568$, find the amount of money John had saved.

Ans: a) _____ [2]

b) _____ [2]

7 8 640 people registered to take part in a walkathon.
There were 5 times as many adults as children.
When 80 women and 80 children withdrew from the walkathon, the number of women who took part in the walkathon became twice the number of children who took part in the walkathon.
How many men took part in the walkathon?

Ans: [3]

(Go on to the next page)

8 Mdm Dinah wanted to give some stickers to every pupil in her art class.
If she were to give 8 stickers to each pupil, she would be short of 16 stickers.
If she were to give 6 stickers to each pupil, she would have 2 stickers left.
How many pupils were there in her art class?

Ans: _____[3]

9 There were 450 oranges, 280 apples and some pears in a carton.
When an equal number of rotten oranges and rotten apples were thrown away, the number of oranges left became thrice the number of apples left.
There were 90 more pears than apples left.
How many fruits were left in the box?

Ans: _____[3]

(Go on to the next page)

10 In a NATAS fair, the ratio of the number of men to the number of women was 5 : 8.

$\frac{1}{3}$ of the men and $\frac{1}{4}$ of the women left the fair.

There were 4 480 people who remained in the NATAS fair.
How many people were in the NATAS fair at first?

Ans: _____ [3]

11 There were some children in the hall. $\frac{1}{4}$ of the children were girls.

After $\frac{1}{3}$ of the girls had left the hall, there were 42 more boys than girls remaining in the hall.

How many children were in the hall at first?

Ans: _____ [3]

12 Dennis, Elvis, Faith and George donated some money to the School Pocket Fund.

The ratio of the amount donated by Dennis to the total amount donated by Elvis, Faith and George was 1 : 7.

Elvis donated $\frac{5}{11}$ of the total amount.

Faith donated $\frac{1}{3}$ of the amount donated by Dennis, Elvis and George.

If Dennis donated \$132 less than Faith, what is the total amount donated by the four children?

Ans: _____ [4]

(Go on to the next page)

13 There were some roses at a florist shop.

On Friday, the florist sold $\frac{1}{3}$ of the roses and an additional of 14 stalks of roses.

On Saturday, the florist sold $\frac{3}{4}$ of the remaining roses and an additional of 25 stalks of roses.

There were 98 roses left.

How many roses were sold on Friday?

Ans:_____ [4]

(Go on to the next page)

14 Jack, Meili and Raj shared some 50-cent coins.

They each had an average of 28 coins.

The total amount of money that Jack and Meili had was $7 more than the total amount of Jack and Raj had.

If Raj's amount was 4 times of Jack's amount, how much more money did Meili have than Jack?

Ans: _____ [4]

(Go on to the next page)

15 A number of people visited the Bird Park last Saturday.

The ratio of the number of adults (excluding senior citizens) to the number of children is 3 : 5.

The ratio of the number of adults to the number of senior citizens is 4 : 1.

The entrance fees were shown below:

Admission	Prices for each ticket
1 Child	$9.50
1 Adult	$18.50
1 Senior citizen	$8.00

Bird Park collected $7 848 on that day.

How many children visited the Bird Park on that day?

Ans: _____ [5]

(Go on to the next page)

16 The figure below, not drawn to scale, is made up of Square A, Rectangle B and Circle C overlapping one another.

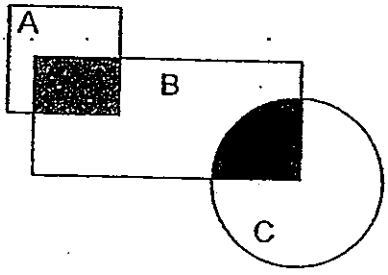
The ratio of the area of Square A to the area of Rectangle B is 1 : 3.

The ratio of the area of Rectangle B to the area of Circle C is 2 : 1.

$\frac{1}{3}$ of Square A and $\frac{1}{4}$ of Rectangle B are shaded.

The total unshaded area is 64 cm^2.

Find the area of Circle C.



Ans: _____ [5]

(Go on to the next page)

17 Gina, Sally and Zubaidah had a collection of 1 112 stickers.

$\frac{1}{4}$ of Gina's sticker collection was 28 stickers more than $\frac{1}{2}$ Sally's collection.

Zubaidah's sticker collection is $\frac{1}{3}$ of Sally's sticker collection.

How many stickers did each of the girls have?

Ans: Sally:_____ }

Gina:_____ } [5]

Zubaidah:_____ }

(Go on to the next page)

18 Kelly had 240 stickers more than Jack at first.

After Kelly gave away $\frac{1}{5}$ of her stickers and Jack gave away $\frac{3}{4}$ of his stickers, they had 507 stickers altogether.

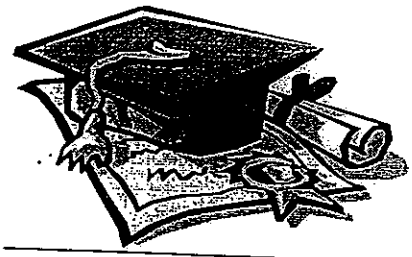
(a) How many stickers did Kelly have at first?

(b) How many stickers did Jack give away?

Ans: a)_____ [3]

b)_____ [1]

End of Paper



ANSWER SHEET

EXAM PAPER 2012

SCHOOL : ROSYTH
SUBJECT : PRIMARY 6 MATHEMATICS

TERM : CA1

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

16)740000 **17)2¼** **18)1/8** **19)103** **20)5 : 3**

21)6 **22)1/18** **23)$(19h/4)** **24)(8h+10)**

25)square Prism **26)2** **27)19** **28)40** **29)$120**

30)21

P6 Math CA1 (Paper 2)

1. 7

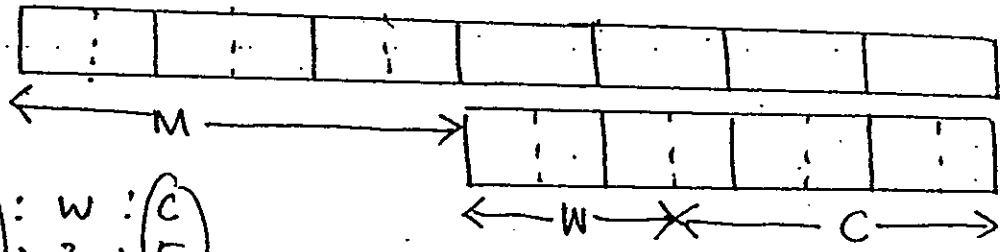
2. $192 \div 2 = 96$ days
$96 \div 7 = 13$ r 5 (13 weeks and 5 days) or (13.7 weeks) > $0.7 \times 7 \approx 5$ days
Tue, wed, thurs, fri, sat (five days later starting from tues) → Sat or on the 96th day

3. $\frac{5}{4} \div \frac{1}{3} = 3\frac{3}{4}$ pieces
remaining
$\frac{3}{4} \times \frac{1}{3} = \frac{1}{4}$ pieces

Or $3 \times \frac{1}{3} = 1$
$\frac{5}{4} - 1 = \frac{1}{4}$

4. 3u → 36 (square)
1u → $36 \div 3 = 12$
2u → $2 \times 12 = 24$ (Triangle)
$24 \div 3 = 8$

5. Model method



M : W : C
6 : 3 : 5

Branching Method

People (14/14)
- $\frac{3}{7}$ (M)
- $\frac{4}{7}$ (W+C) (8/14)
  - $\frac{3}{8}$ (W) $\left(\frac{3}{8} \times \frac{4}{7} = \frac{3}{14}\right)$
  - $\frac{5}{8}$ (C) $\left(\frac{5}{8} \times \frac{4}{7} = \frac{5}{14}\right)$

Ratio Method

M	:	W+C	:	T
3	:	4	:	7
6	:	8	:	14

(×2)

W	:	C	:	W+C
3	:	5	:	8

Answer: 6 : 5

6.

(a) $\$y \div 2 = \$(\frac{y}{2})$

$\$(\frac{y}{2}) - \$178 = \$(\frac{y}{2} - 178)$

(b) $\$568 \div 2 - \$178 = \$106$

7.

6u → 8640

(children) 1u → 8640 ÷ 6 = 1440

(No. of children who took part) 1440 – 80 = 1360

(women + children who took part) 1360 x 3 = 4080

(total took part in the end) 8640 – 80 – 80 = 8480

(men) 8 480 – 4 080 = 4 400

OR

(adults) 5u → 7200

(men) 7200 – 80 – 1 360 – 1 360 = 4 400

8.

	1	2	3	4	5	6	7	8	9
8	8	16	24				176	184	7u
-16									56
6									54
+2									56

8 – 6 = 2

16 + 2 = 18

18 ÷ 2 = 9

8 x □

6 x □

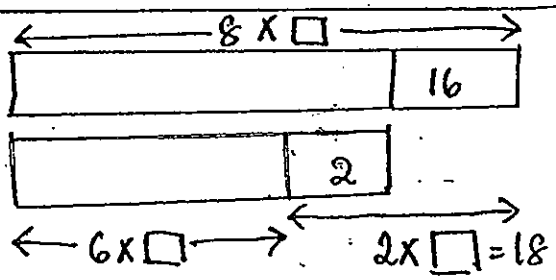
16 + 2 = 18

so 2 x □ = 18

so □ must be 9

2 + 16 = 18 8 – 6 = 2

18 ÷ 2 = 9



(450 − 280 = 170)

9.

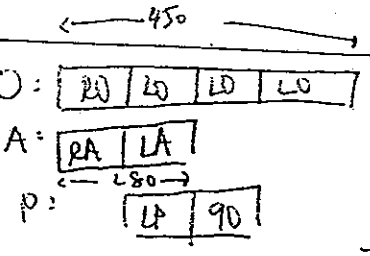
2u → 170

1u → 170 ÷ 2 = 85

5u → 85 x 5 = 425

(Fruits left) 425 + 90 = 515

20 → Rotten Oranges
40 → Left Oranges



constant value problem

10.

	M	W	Total
×3	5	8	13 u
	15	24	39 u

Remaining

(Men) $\frac{2}{3}$ → 10u } Remained

(Women) $\frac{3}{4}$ → 18u }

Total people → 28u

$\frac{1}{3}$ of 15 = 5 M left

$\frac{1}{4}$ of 24 = 6 W left

28u → 4 480

1u → 4 480 ÷ 28 = 160

39u → 160 x 39 = 6 240

11.

Girls → $\frac{1}{4}$

Boys → $\frac{3}{4} = \frac{9}{12}$

Girls remained → $\frac{2}{3} \times \frac{1}{4} = \frac{2}{12}$

9u − 2u = 7u

7u → 42 (M1)

1u → 42 ÷ 7 = 6

12u → 12 x 6 = 72

C (12/12) — G (1/4) — $\frac{1}{3}$ Left; $\frac{2}{3}$ Remained ($\frac{2}{3} \times \frac{1}{4} = \frac{2}{12}$)

B ($\frac{3}{4}$) ($\frac{9}{12}$)

$\frac{9}{12} - \frac{2}{12} = \frac{7}{12}$

7u → 42

1u → 6

12u → 72

OR

	G	B	T
	1	3	4
×3	3	9	12
−1	(2)	(9)	11

12.

	D	E + F + G	Total
1	[illegible]	7	8u
	[illegible]	77	88u

×11

	E	D + F + G	
5		6	
40		48	11u
			88u

	F	D + E + G	
1		3	
22		66	4u
			88u

D	E	F	G
11	40	22	15

G → 88 − 11 − 40 − 22 = 15

11u → 132 (M1)

1u → 132 ÷ 11 = $12

88u → $12 x 88 = $1056

relationship between D and F

D : F

1 : 2 (any equivalent)

13.

$\frac{1}{4}$ → 25 + 98 = 123

1 whole → 123 x 4 = 492

$\frac{2}{3}$ → 492 + 14 = 506

$\frac{1}{3}$ → 506 ÷ 2 = 253

Friday → 253 + 14 = 267

OR

(Total) 1 whole → 253 x 3 = 759

Friday → 759 – 492 = 267

15.

S	:	A	:	C
1	:	4	:	5
3	:	12	:	20

12 Adults → 12 x 18.50 = 222

20 Children → 20 x $9.50 = 190

3 Senior Citizens → 3 x $8.00 = $24

222 + 190 + 24 = 436

436u → $7 848 (M1)

1u → 18 sets of visitors

18 sets → 18 x 20 = 360

17

G → 12u + (28 x 4 = 112)

S → 6u

Z → 2u

12u + 112 + 6u + 2u = 1 112

20u → 1 112 – 112 = 1 000

1u → 1 000 ÷ 20 = 50

S → 300

G → 712

Z → 100

18.

Before:

K → 20u + 240

J → 20u

(LCM of 4 and 5 is 20)

After :

What is Left

K → $\frac{4}{5}$ x 20u = 16u + $\frac{4}{5}$ x 240 = 192

K → 16u + 192

J → $\frac{3}{4}$ x 20u = 5u

What is Left : (K + J) → 16u + 192 + 5u = 507

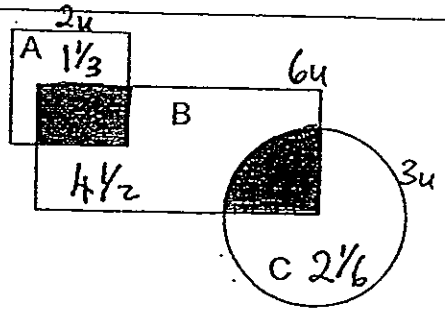
21u → 507 – 192 = 315

1u → 315 ÷ 21 = 15

(a) K → 20u + 240 = 540 (M1, A1)

(b) 15u → 225

16.



A	:	B	:	C
1	:	3		
		B	:	C
		2	:	1
2	:	6	:	3

$A \rightarrow \frac{1}{3} \times 2 = \frac{2}{3}$ (shaded)

$2 - \frac{2}{3} = 1\frac{1}{3}$ (unshaded)

$B \rightarrow \frac{1}{4} \times 6 = \frac{6}{4}$ (shaded) (B has 2 shaded parts)

$\frac{6}{4} - \frac{2}{3} = \frac{5}{6}$ (shaded)

↳ overlapping with A.

$6 - \frac{6}{4} = 4\frac{1}{2}$ (unshaded)

$C \rightarrow 3 - \frac{5}{6} = 2\frac{1}{6}$ (unshaded)

Total unshaded units $\rightarrow 1\frac{1}{3} + 4\frac{1}{2} + 2\frac{1}{6} = 8u$

$8u \rightarrow 64$

$1u \rightarrow 64 \div 8 = 8$

$3u \rightarrow 3 \times 8 = 24\ cm^2$

OR

A	:	B	:	C
1	:	3		
		B	:	C
		2	:	1
2	:	6	:	3
12	:	36	:	18

$A \rightarrow \frac{1}{3} \times 12 = 4$ (shaded)

$12 - 4 = 8$ (unshaded)

$B \rightarrow \frac{1}{4} \times 36 = 9$ (shaded)

$9 - 4 = 5$ (shaded)

$36 - 9 = 27$ (unshaded)

$C \rightarrow 18 - 5 = 13$ (unshaded)

Total unshaded units $\rightarrow 8 + 27 + 13 = 48u$

$48u \rightarrow 64$

$4u \rightarrow 64 \div 48 = 1\frac{1}{3}$

$8u \rightarrow 18 \times 1\frac{1}{3} = 24\ cm^2$

Possible units for unshaded areas

Unshaded Units Area A	Unshaded Units Area B	Unshaded Units Area C	Total Unshaded Units	Units for Circle C
1/3	4 ½	2 1/6	8	3
	13 ½	6 ½	24	9
2	27	13	48	18
6	54	26	96	36
12	108	52	192	72
18	162	78	288	108