

SA1

RAFFLES GIRLS' PRIMARY SCHOOL



SEMESTRAL ASSESSMENT (1)

2005

Your Score Out of 100 marks		
	Class	Level
Highest score		
Average score		
Parent's Signature		

Name: _____ Class: P 5 _____ Index No.: _____

10 MAY 2005 MATHEMATICS ATT: 2 h 15 min

Booklet A (20 marks)

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) and shade the correct oval in the Optical Answer Sheet.

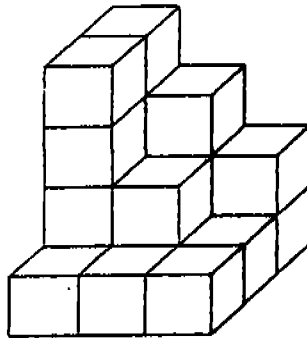
1. $57\ 048 = 50\ 000 + \boxed{} + 40 + 8$

- (1) 70
- (2) 700
- (3) 7 000
- (4) 70 000

2. $4\ 800 \times 20 = 96 \times \boxed{}$

- (1) 10
- (2) 100
- (3) 1 000
- (4) 10 000

3. How many cubes are there in this figure?

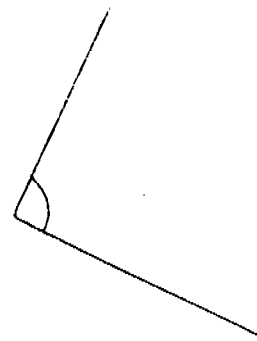
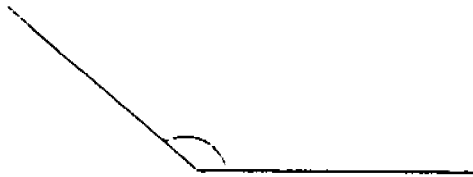


- (1) 10
- (2) 12
- (3) 15
- (4) 19

4. Which one of the following measures 118° ?

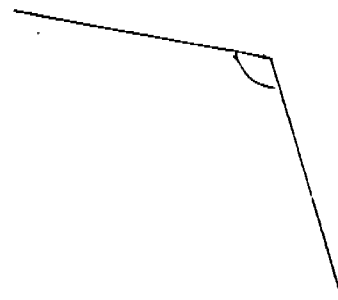
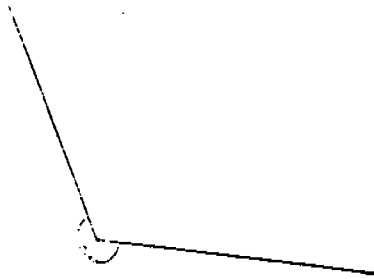
(1)

(2)



(3)

(4)



5. How many quarters are there in $2\frac{3}{4}$?

- (1) 9
- (2) 2
- (3) 11
- (4) 23

6. Which of the following is equal to $\frac{3}{5} + \frac{7}{10}$?

- (1) $\frac{1}{10}$
- (2) $\frac{10}{15}$
- (3) $1\frac{3}{10}$
- (4) $1\frac{10}{15}$

7. The value of 8 tens, 2 tenths and 5 hundredths is _____.

- (1) 8.25
- (2) 80.25
- (3) 80.205
- (4) 100.05

8. $3\frac{1}{8}$ expressed as a decimal is _____.

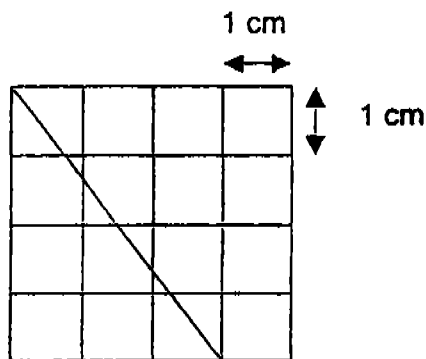
- (1) 0.125
- (2) 0.180
- (3) 3.125
- (4) 3.180

9. A rectangle is 12 cm long and 8 cm wide.

What is the ratio of its length to its breadth in its simplest form?

- (1) 2 : 3
- (2) 3 : 2
- (3) 3 : 5
- (4) 4 : 1

10. What is the area of the shaded triangle?



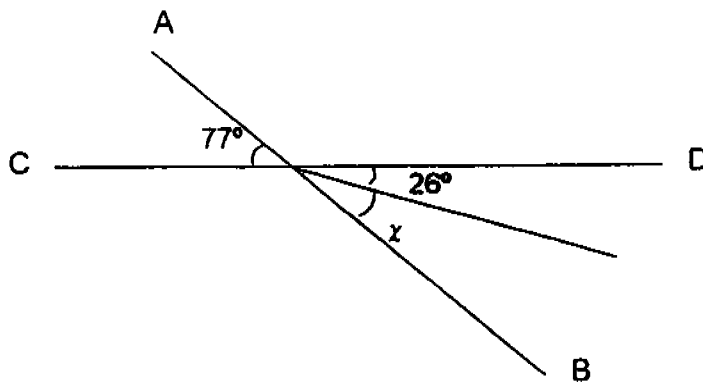
- (1) 5 cm^2
- (2) 6 cm^2
- (3) 7 cm^2
- (4) 4 cm^2

11. Which of the following is the best estimate for the size of a P5 Math textbook?

- (1) 10 cm x 20 cm
- (2) 20 cm x 30 cm
- (3) 30 cm x 50 cm
- (4) 50 cm x 70 cm

12. The diagram below is not drawn to scale. AB and CD are straight lines.

Find the value of $\angle x$.



- (1) 51°
- (2) 61°
- (3) 77°
- (4) 103°

13. The sum of all the factors of 81 is _____.

- (1) 39
- (2) 112
- (3) 121
- (4) 130

14. Which one of the following lengths is the longest?

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

(2) 0.8 km

(3) 8 m

(4) 8 000 cm

15. What is $\frac{2}{5}$ of 2 hours in minutes?

(1) 24 min

(2) 40 min

(3) 48 min

(4) 80 min

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Booklet B1 (30 marks)

Questions 16 to 25 carry 1 mark each. Questions 26 to 35 carry 2 marks each.

Write your answers in the spaces provided.

Give your answers in the units stated.

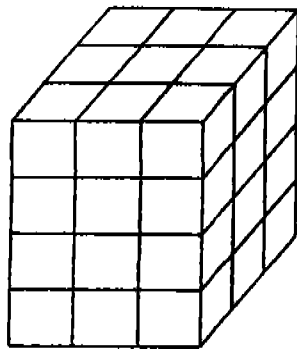
16. Study the number pattern below and fill in the missing numbers.

61 502, 61 527, _____, 61 577, 61 602

17. Find the value of $6 + 4 \times 6 \div 3 - 9$.

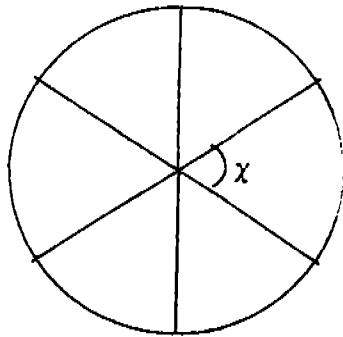
Ans: _____

18. The solid below is made up of 2-cm cubes. What is the volume of the solid?



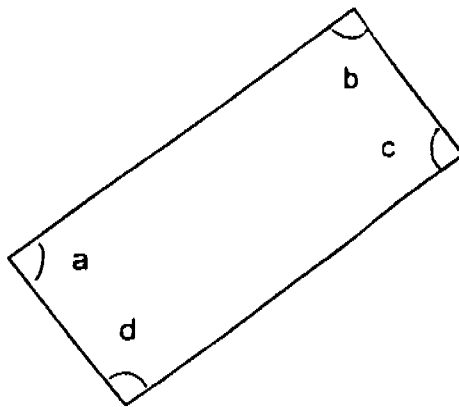
Ans: _____ cm³

19. A circle is divided into 6 equal parts. Find $\angle x$.



Ans: _____°

20. The figure given here is a rectangle. Find the value of $\angle a + \angle b + \angle c + \angle d$.



Ans: _____°

21. Simplify $5\frac{1}{4} - 2\frac{5}{6}$

Ans: _____

22. Express 0.16 as a fraction in its simplest form.

Ans: _____

23. Find the product of 36.7 and 6.

Round off your answer to the nearest whole number.

Ans: _____

24. Divide 45.88 by 8.

Round off your answer to 1 place of decimal.

Ans: _____

25. $32 : 56 = \square : 7$

Find the missing value in the box.

Ans: _____

26. What must be added to 65 555 to make half a million?

Ans: _____

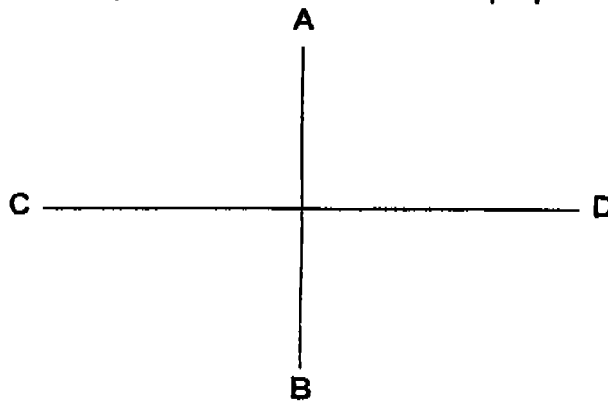
27. How many hundreds are there in seven hundred and thirty-three thousand and six hundred?

Ans: _____ hundreds

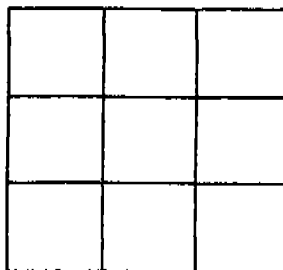
28. Express 0.55 hours in minutes.

Ans: _____ minutes

29. In the figure below, draw a line such that it is perpendicular to AB and parallel to CD.



30. In the figure, shade 2 squares so that there can be no lines of symmetry.



31. Joseph ran $\frac{5}{8}$ of a 2-km distance and walked the rest of the way.

Find the distance Joseph had walked.

Ans: _____ metres

32. A shopkeeper packed $\frac{2}{3}$ kg of flour equally into 6 packets.

Find the weight of each packet.

Ans: _____ kg

33. + 5.39 = 40.06

Find the missing value in the box.

Ans: _____

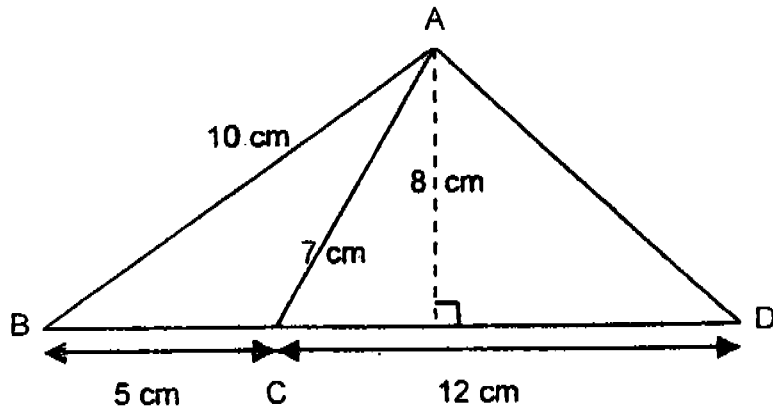
34. Janice and Kelly share a sum of money in the ratio 2 : 3.

If Kelly gets \$12 more than Janice, how much does Janice get?

Ans: \$ _____

35. The figure below is made up of two triangles.

Find the area of $\triangle ABD$.



Ans: _____ cm^2

Name: _____

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Booklet B2 (31 marks)

For questions 36 to 44, show your working clearly in the space below each question.

Write your answers in the space provided.

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

36. Mr Tan had 21 litres of soya milk.

He sold $\frac{3}{7}$ of it. How many litres had he left?

Ans: _____ [3 m]

37. The ratio of Mrs Tan's age to her daughter's age is 9 : 5.

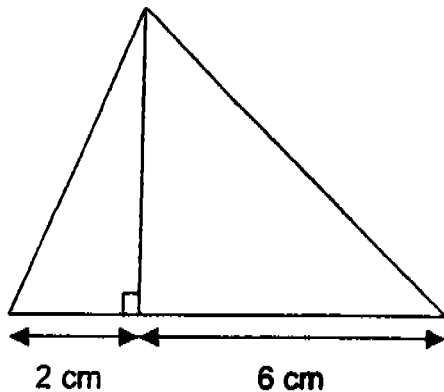
Her daughter is 28 years younger than Mrs Tan.

How old is Mrs Tan?

Ans: _____ [3 m] 13

38. The area of the triangle below is 36 cm^2 .

Find the height of the triangle.



Ans: _____ [3 m]

39. Sarah bought 12 boxes of pies for a party. There were 12 pies in each box.

Each of Sarah's friends ate two pies.

At the end of the party, Sarah found that there were 16 pies left.

(a) How many of her friends were at the party?

(b) If the ratio of the number of girls to the number of boys at the party was 3 : 1, how many boys did Sarah invite to the party?

Ans: (a) _____ [3 m]

(b) _____ [1 m]

40. The figure below is not drawn to scale.

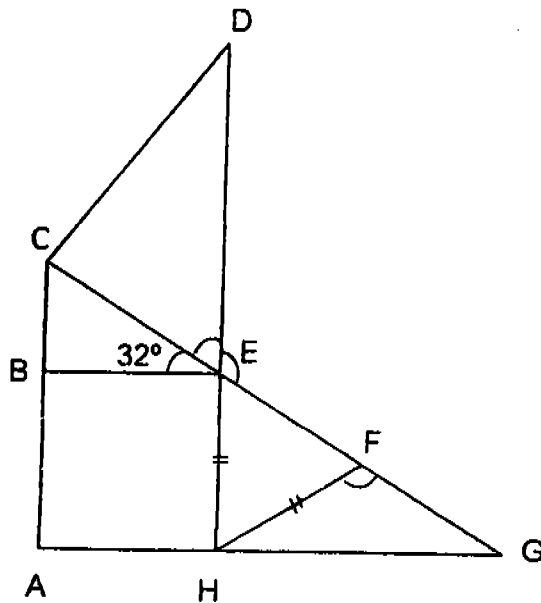
ABEH is a square. CEG, DEH and AHG are straight lines.

$\angle BEC = 32^\circ$ and $EH = HF$.

(a) Find $\angle CED$.

(b) Find $\angle DEF$.

(c) Find $\angle HFG$.



Ans: (a) _____ [1 m]

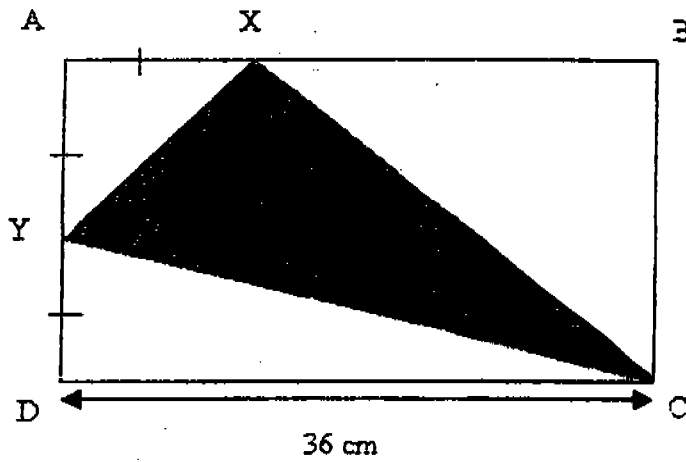
(b) _____ [1 m]

(c) _____ [2 m]

41. The area of rectangle ABCD is 864 cm^2 .

Y is the mid-point of AD. $AX = AY = YD$.

Find the area of $\triangle CXY$.



Ans: _____ [4 m]

42. Zoe had 3 times as many stickers as Kathy. In a game, Zoe lost half the number of her stickers to a friend while Kathy bought 12 more stickers to add to her collection.

The two girls then found they had the same number of stickers.

How many stickers did Zoe have at first?

Ans: _____ [3 m]

43. Ivy is 12 years old now. Cheryl is $\frac{2}{3}$ her age.

(a) What is their total age?

(b) What would be their total age in 5 years' time?

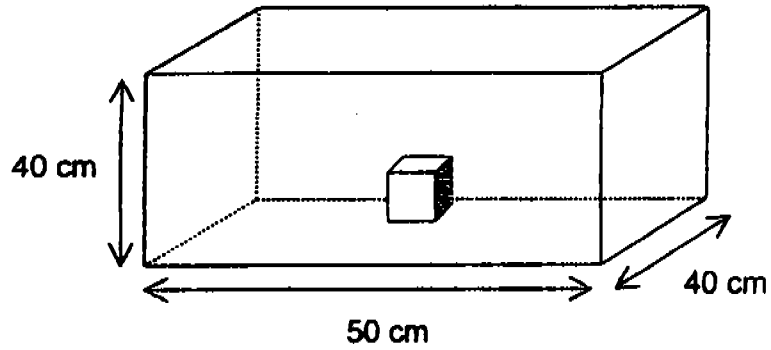
Ans: (a) _____ [2 m]

(b) _____ [1 m]

44. A rectangular tank 50 cm by 40 cm by 40 cm has a metal cube of volume 512 cm^3 in it.

Water is poured into the tank until it is $\frac{3}{4}$ full.

Find the height of the water level when the cube is removed.



Ans: _____ [4 m]

Name: _____

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Booklet B2 (19 marks)

For questions 45 to 48, show your working clearly in the space below each question.

Write your answers in the space provided.

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

45. $\frac{3}{8}$ of Chris' money is equal to $\frac{1}{4}$ of Joan's money.

After each of them spent \$20, Joan had \$52 more than Chris.

How much money does Joan have left after spending?

Ans: _____ [4 m]

19

46. Peter had 2 packets of stamps. Packet X had 216 stamps more than Packet Y.

After Peter had taken out 52 stamps from Packet Y to put into Packet X, there were thrice as many stamps in Packet X as in Packet Y.

- (a) How many stamps were there in Packet X at the beginning?
- (b) Express the number of stamps left in Packet Y after the transfer to the nearest hundred.

Ans: (a) _____ [4 m]

(b) _____ [1 m]

47. Pauline has some 10-cent coins and 50-cent coins. The coins add up to \$5.80. If there are four more 10-cent coins than 50-cent coins, how many 10-cent coins are there?

Ans: _____ [5 m]

48. Three brothers, Tom, Dick and Harry shared some marbles in the ratio 5 : 7 : 5 respectively. Dick added 14 more marbles to his number such that his share became 70.

- (a) How many marbles did the brothers share at first?
- (b) What was the new ratio of the number of marbles Tom, Dick and Harry had?

Ans: (a) _____ [4 m]

(b) _____ [1 m]

-- END OF PAPER--

Setters: C. Ong, A. Khalic, A. Ong

SA1 Answer Key

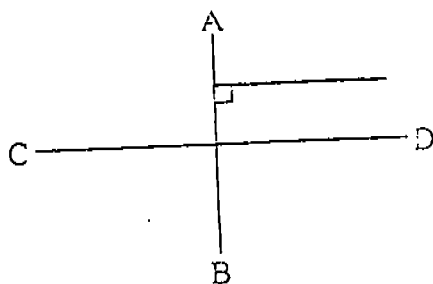
Booklet A

Q	Ans	Q	Ans	Q	Ans
1	3	6	3	11	2
2	3	7	2	12	1
3	4	8	3	13	3
4	1/4	9	2	14	2
5	3	10	2	15	3

Booklet B1

Q	Ans	Q	Ans
16	61 552	26	434 445
17	5	27	7 336
18	288	28	33
19	60	29	Refer to diagram below *
20	360	30	Refer to diagram below #
21	$2\frac{5}{12}$	31	750
22	$\frac{4}{25}$	32	$\frac{1}{9}$
23	220	33	34.67
24	5.7	34	24
25	4	35	68

* 29.



Accept answer as long as a 90° is formed with AB

30. Possible answers

36. Method 1:

$$\frac{3}{7} \times 21 = 9 \text{ ----- M1, A1}$$

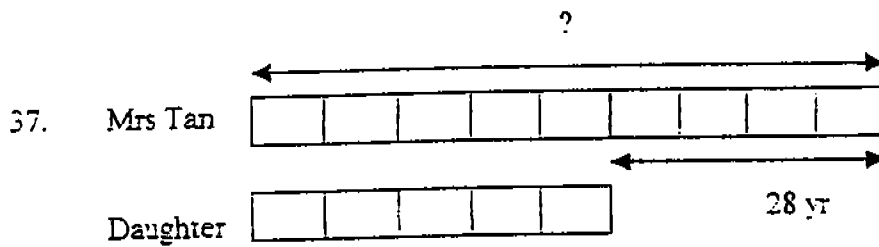
$$21 - 9 = 12 \text{ ----- A1}$$

Method 2:

$$\frac{7}{7} - \frac{3}{7} = \frac{4}{7} \text{ ----- A1}$$

$$\frac{1}{7} = 12 \text{ ----- M1, A1}$$

He will have 12 l left.



$$28 \div 4 = 7$$

$$7 \times 9 = 63 \text{ ----- M1, A1}$$

Mrs Tan is 63 years old.

38. Base - $6 \div 2 = 8 \text{ cm}$ ----- M1

Height - $72 \div 8 = \underline{9 \text{ cm}}$ ----- M1, A1

39. a) Number of pies - $12 \times 12 = 144$ ----- M1

Number eaten - $144 - 16 = 128$

Number of friends - $128 \div 2 = \underline{64}$ ----- M1, A1

b) 4 units - 64

1 unit (boys) - $64 \div 4 = \underline{16}$ ----- A1

40. a) **Method 1:**
 $\angle CED = 90^\circ - 32^\circ = 58^\circ$ ----- A1

Method 2:

Base angles of $\triangle HEF = 180^\circ - 64^\circ = 116^\circ$

$\angle HEF = 116^\circ \div 2 = 58^\circ$

$\angle CED = 58^\circ$ (Vertically opp. to $\angle HEF$) ----- A1

b) **Method 1:**

$\angle BEH = 90^\circ$

$\angle FEH = 180^\circ - 90^\circ - 32^\circ = 58^\circ$

$\angle DEF = 180^\circ - 58^\circ = 122^\circ$ ----- A1

Method 2:

$90^\circ + 32^\circ = 122^\circ$

(Vertically opp. angles) $\angle CEH = \angle DEF = 122^\circ$ ----- A1

c) $\angle CED = \angle HEF = 58^\circ$ (Vertically opp. angles) ----- M½

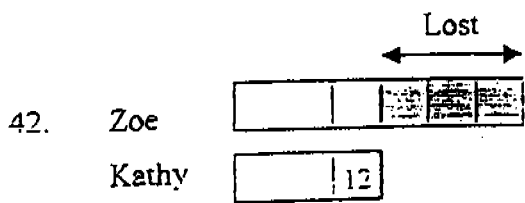
$\angle HEF = \angle HFE = 58^\circ$ (Base angles of an isosceles triangle) ----- M½

$\angle HFG = 180^\circ - 58^\circ = 122^\circ$ ----- A1

41. Breadth of rect. ABCD = $864 \div 36$
 $= 24$ cm ----- A½

Area of triangles E, F, G = $(\frac{1}{2} \times 36 \times 12) + (\frac{1}{2} \times 12 \times 12) + (\frac{1}{2} \times 24 \times 24)$ } M½ for each area found
 $= 216 + 72 + 288$
 $= 576$ cm²

Area of triangle CXY = $864 - 576$ ----- M1
 $= 288$ cm² ----- A1



1 unit - 12 ----- M1
 6 units - 12 x 6 = 72 ----- M1, A1
 Zoe had 72 stickers at first.

43. a) Cheryl - $\frac{2}{3} \times 12 = 8$ years old ----- M½
 Total age - 12 + 8 = 20 years ----- M½, A1

b) Total age in 5 years' time - 20 - 10 = 30 years ----- A1

44. Method 1:

$\frac{3}{4} \times (50 \times 40 \times 40) = 60\,000 \text{ cm}^3$ ----- M1, A1
 The tank has a volume of 60 000 cm³ with the cube in it.
 $20 \times 20 \times 20 = 8\,000 \text{ cm}^3$
 $60\,000 - 8\,000 = 52\,000 \text{ cm}^3$ ----- A½
 $52\,000 \div (50 \times 40) = 26 \text{ cm}$ ----- M1, A½
 The new height is 26 cm.

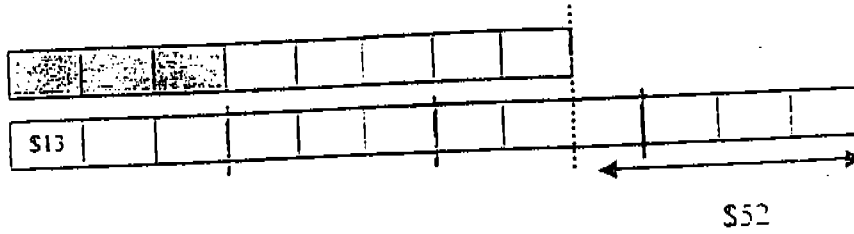
Method 2:

$\frac{3}{4} \times 40 = 30 \text{ cm}$
 $50 \times 40 \times 30 = 60\,000 \text{ cm}^3$ ----- M1
 $20 \times 20 \times 20 = 8\,000 \text{ cm}^3$
 $60\,000 - 8\,000 = 52\,000 \text{ cm}^3$ ----- M1
 $52\,000 \div (50 \times 40) = 26 \text{ cm}$ ----- M1, A1

$\frac{3}{4} \times (50 \times 40 \times 40)$
 $= 60\,000 \text{ cm}^3$
 (M1, A1)
 $60\,000 - 8\,000 = 52\,000$
 (A½)
 $52\,000 \div (50 \times 40)$
 $= 26$ ✓
 (Accept 29 or 30 as well)
 (M1, A½)

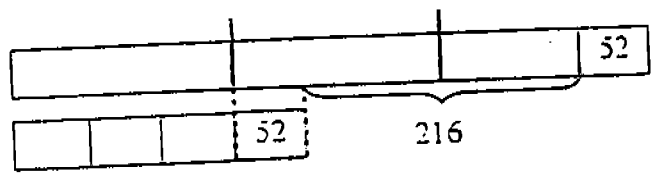
26

45. Chris
Joan



$\$52 \div 4 = \13 ----- M1, A1
 $\$13 \times 12 = \156 ----- M1/2, A1/2
 $\$156 - \$20 = \$136$ ----- M1/2, A1/2
 Joan has \$136 left after spending.

46. X
Y



a) $52 + 216 + 52 = 320$ ----- M1
 2 units - 320
 1 unit - $320 \div 2 = 160$
 3 units - $160 \times 3 = 480$ ----- M1
 $480 - 52 = 428$ ----- M1, A1

 b) $160 \approx 200$ ----- A1

47. $4 \times 10 \text{ cent} = 40 \text{ cents}$
 $\$5.80 - \$0.40 = \$5.40$ ----- M1
 $\$0.10 + \$0.50 = \$0.60$ ----- M1
 $\$5.40 \div \$0.60 = 9$ ----- M1
 9 sets of 10-cents & 50-cents coins
 $9 + 4 = 13$ ----- M1, A1

48. a) At first
 (Dick) 7 units - $70 - 14 = 56$ ----- M1
 1 unit - $56 \div 7 = 8$
 Harry / Tom - $5 \times 8 = 40$ ----- M1
 Total number at first - $56 + 40 + 40 = \underline{136}$ ----- M1, A1

b) T : D : H
 40 : 70 : 40
 = 20 : 35 : 20
 = 4 : 7 : 4 ----- A1

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