

SOUTH SYDNEY HIGH SCHOOL.

YEAR 8

TERM III EXAMINATION

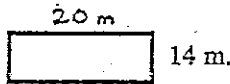
MATHEMATICS.

PART A. (Do not use calculator for this part)

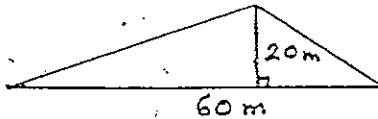
1. Write in figures: Forty thousand and sixteen.
2. Which is the largest number among (0.09, 0.895, 0.9, and 0.187)
3. Peter walks at a steady speed of 4 Km per hour from 10.30 am to 3 pm.
How many kilometres did he walk?

4. Write as a decimal $\frac{2}{10} + \frac{7}{1000}$.

5. Find the perimeter of this rectangle.



6. Find the area of this triangle .

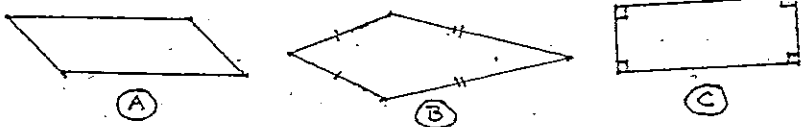


7 Simplify $3x + 11 -x +5$

8. 100 cans of soft drinks, each containing 60 mL, was bought for a party.
How many litres of soft drink is this in total?

9. Simplify: $3a \times 5b \times 2$

10. Which of these figures has exactly TWO axes of symmetry?

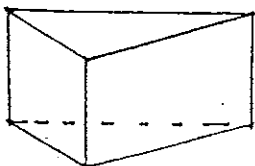


11. Find the value of $4^2 + \sqrt{25}$

12. Which of the numbers $\{\frac{2}{3}, 0.3, 60\%, 0.06\}$ is equal to $\frac{15}{25}$?

13. Find the volume of a rectangular parcel 40 cm. long, 20 cm wide and 10 cm high.

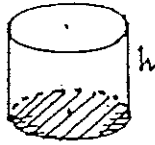
14.



- (a) Name this solid
- (b) Number of vertices?
- (c) Number of rectangular faces?

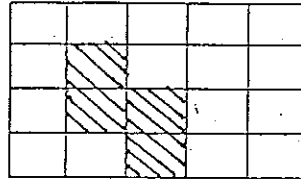
A vertical column of horizontal lines on the right side of the page for writing answers.

15. This is a cylinder with a volume of 120cm^3 and an area of cross section 10cm^2 .
What is its height?

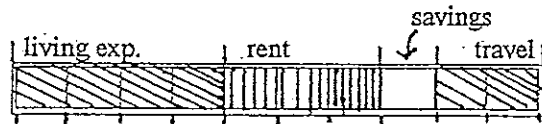


16. $1020 = 1.02 \times ?$

17. What percent of the total shape is shaded?



18. The bar graph below shows how Mary spends her weekly income. She spends \$210 on rent. How much is spent for travel?



19. A group of people have the following heights, in cm. { 158, 142, 160, 150, 140 }
Find the mean height of this group.

20. Expand $5(2x + 1)$

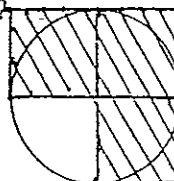
21. Solve the equation. $\frac{x}{2} + 1 = 7$

22. Factorise $3x - 12$

23. Simplify $\frac{12a^2b}{6ab}$

24. Which is the larger of the two numbers 3.25×10^5 or 43500?

25. The side of each of these squares is the same as the radius of the circle.
Which has more area, the circle or the three squares together?



26. The price of milk increases from \$1.20 to \$1.50. What is the percent increase?

PART B (CALCULATOR MAY BE USED). SHOW FULL WORKING FOR PART B.

Question 27.

(a) Anna bought two lengths of a material, one 2.3 metres long and the other 1 metre and 50 millimetres long. Find the total price she paid if this material cost \$16.40 per metre.

(b) John started working at 7.30 am and finished at 4.15 pm with a lunch break for 45 minutes. He was paid for the hours worked at \$12.50 per hour. What was his wage for this day?

(c) $\frac{1}{20}$ of the students of a school were absent on Wednesday. $\frac{1}{5}$ of the students went on an excursion and the rest went to sports. What fraction of the students were at sports.

Question 28.

(a) A car salesman is paid \$150 per week plus 15% commission on his sales. In one week he sold two cars for a total of \$48 000. Find his total income for the week.

(b) Normal return airfare to Singapore is \$1200. Qantas offers a discount of 30%. Garuda airlines offers full fare for the first person and half fare for the second. If two people intend to go on this trip, which air line is cheaper and by how much?

(c) A square garden is 156.25 sq. metres in area.

(i) How long is one side? -----

ii) If fencing costs \$8.50 per metre, how much will it cost to fence this garden on all sides? -----

Question 29.

(a) Simplify: $3.2 + 12.08 + 21.72 - 5 \times 7.04$ -----

(b) Complete: $\frac{3}{5} + \frac{1}{4} = \frac{\quad}{40}$ -----

Question 32.

(a) If 18 calculators cost \$522, how much would 70 calculators cost?

(b) Find the total surface area of a rectangular prism 9 m. long, 4 m. wide and 3 m. high.

(c) The volume (V) of a sphere of radius (R) is given by the formula $V = \frac{4}{3}\pi R^3$
 Find the volume of a sphere of radius 25 cm.

Question 33.

(a) The table shows the membership numbers of a health club for 1994.

| | Men | Women |
|-----------|-----|-------|
| Full time | 56 | 72 |
| Part-time | 74 | 18 |
| Total | 130 | 90 |

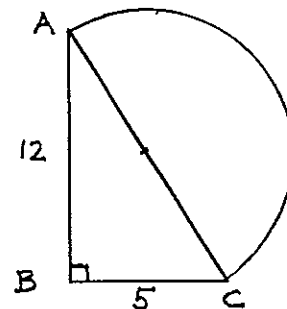
(i) What percent of the women members are part-time?

(ii) Full time membership cost \$120 per year and part-time membership cost \$80. Find the total membership fees collected for the club in 1994.

(b) A garden plot is in the shape of a triangle joined by a semi-circle as in the figure. (Measurements are in metres.)

(i) Find the length of AC. (Use Pythagoras rule)

(ii) Calculate the total area of the garden.



Year 8 SSHS Term IIISolutionsPart A

- 1) 40016 2) 0.9 3) 18km 4) 0.207 5) 68m 6) 600m²
 7) 2x+16 8) 6L 9) 30ab 10) C 11) 21 12) 60%
 13) 8000 cm³ 14) (a) triangular prism (b) 6 (c) 3 15) 12 cm 16) 1000
 17) 20% 18) \$140 19) 150 cm 20) 10x+5 21) x=12 22) 3(x-4)
 23) 2a 24) 3.25 x 10⁵ 25) Circle (m² > 3r²) 26) 25% 27

PART B

- 27) (a) \$54.94 (b) \$100 (c) 1/25 28) (a) \$7350 (b) Qantas by \$120
 28) (c) i/ 12.5 ii/ \$425 29) (a) 1.8 (b) 3 3/40 (c) 10425 (d) 9.03
 30) (a) 2.33 (b) 4(2-3x+5y) (c) x = 3/2

31) a) See → (b) $\sum f = 21$ (c) Mode = 17

d) Range = 4 (e) Mean = $\frac{358}{21} \approx 17$

| x | f | fx |
|----|---|-----|
| 15 | 2 | 30 |
| 16 | 4 | 64 |
| 17 | 8 | 136 |
| 18 | 5 | 90 |
| 19 | 2 | 38 |

$\sum f = 21$ $358 = \sum fx$

32) a) \$2030 b) 150m² c) 65449.85 cm³

33) a) i/ 20% ii/ \$22720 b) i/ 13m ii/ 96.37m²