



SOUTH SYDNEY HIGH SCHOOL

2001
School Certificate
Trial Examination

Mathematics

Instruction
Booklet

General Instructions

- Reading time: 10 minutes
- Working time: 2 hours
- Do NOT begin the test until the supervisor tells you to do so
- This test has TWO sections
Section 1: Questions 1 – 25 (25 marks)
Section 2: Questions 26 – 84 (75 marks)
- Attempt ALL questions
- There will be a short break between Section 1 and Section 2
- Calculators may be used in Section 2 only
- The Formulae on page 4 of the Instruction Booklet may be used in both sections
- Write using black or blue pen
- Draw diagrams using pencil
- Write your student number and/or name at the top of every page

This paper **MUST NOT** be removed from the examination room

STUDENT NUMBER/NAME:

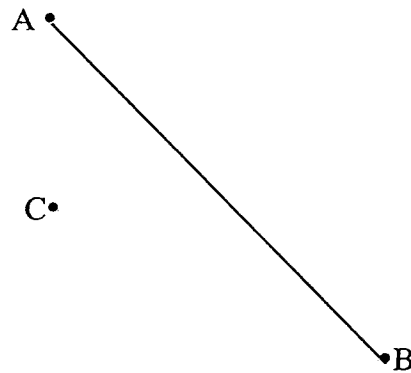
Instructions for answering questions

- ALL answers to questions in Section 1 and Section 2 Part B must be written in the spaces provided in the Section 1 and Section 2 Part B Question and Answer booklets.
- **Completing the diagram**

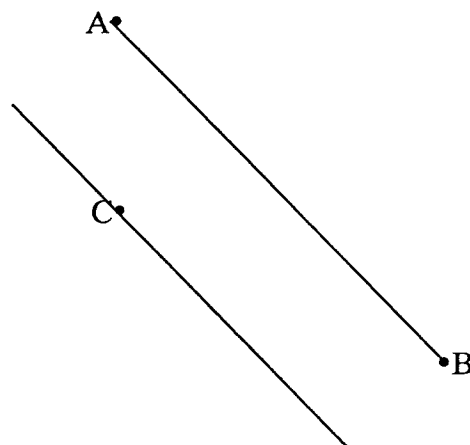
You may wish to use a pencil for completing the diagram questions.

Sample 1

Draw a line through C, parallel to AB.



The question has been answered below.



The parallel line is drawn using a set square or a pair of compasses and ruler.

- **Multiple choice**

Complete your answers to the multiple choice questions (in Section 2 Part A) on the answer grid provided. Select the alternative A, B, C or D that best answers the question. Mark the box clearly with an (X)

Sample 2

$$6 + 2 = \quad (\text{A}) \quad 3 \quad \quad (\text{B}) \quad 4 \quad \quad (\text{C}) \quad 8 \quad \quad (\text{D}) \quad 12$$

The letter C needs to be selected with an (X) on the answer grid provided.

If you think you have made a mistake, put a cross through the incorrect answer and fill in the new correct answer.

If you have changed your mind and have crossed out what you consider to be the correct answer, then indicate the correct answer by writing the word *correct* and drawing an arrow pointing to the correct answer.

- **Multiple choice questions that may have more than one correct answer**

Complete your answers to the multiple choice questions that may have more than one correct answer in Section 2 Part B Question and Answer booklet.

Sample 3

$$\frac{3}{4} = \quad \text{A} \quad \frac{3-1}{4-1} \quad \quad \text{B} \quad \frac{3+1}{4+1} \quad \quad \text{C} \quad \frac{3 \times 1}{4 \times 1} \quad \quad \text{D} \quad \frac{3 \div 1}{4 \div 1}$$

A B C D

Two oval shapes have been filled in to show the two correct answers.

If you think you have made a mistake, put a cross through the incorrect answer and fill in the new answer.

If you have changed your mind and have crossed out what you consider to be the correct answer, then indicate the correct answer by writing the word *correct* and drawing an arrow.

FORMULAE

For use in Section 1 and Section 2

Circumference of a circle = $\pi \times$ diameter

$$C = \pi d$$

Area of a circle = $\pi \times$ radius squared

$$A = \pi r^2$$

Area of a parallelogram = base \times perpendicular height

$$A = bh$$

Area of a rhombus = half the product of the diagonals

$$A = \frac{1}{2}xy$$

Area of a trapezium = half the sum of the parallel sides \times perpendicular height

$$A = \left(\frac{a+b}{2} \right) h$$

Volume of a prism = area of cross-section \times height

$$V = Ah$$

Volume of a cylinder = $\pi \times$ radius squared \times height

$$V = \pi r^2 h$$

Pythagoras' theorem states :

In a right-angled triangle,

the hypotenuse squared = the sum of the squares of the other two sides

$$c^2 = a^2 + b^2$$

NSW INDEPENDENT TRIAL EXAMS TRIAL SCHOOL CERTIFICATE EXAM MATHEMATICS - 2001

Solutions

Section 1

1. 660 000
2. 34 700
3. 5
4. 300
5. See below
6. 4
7. See below
8. 17
9. 1 520
10. 36
11. $\frac{3}{7}$
12. 15 hours
13. 360
14. 2.5
15. 8:50 pm
16. \$720
17. (6,0)
18. 1.5 L
19. 22
20. See below
21. Many possible answers
22. Rhombus
23. 136 cm^2
24. 74
25. 17

Section 2 Part A

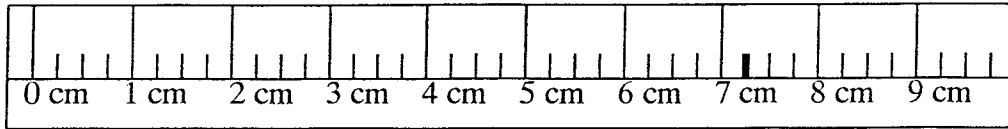
- | | |
|-------|-------|
| 26. c | 51. b |
| 27. b | 52. d |
| 28. a | 53. b |
| 29. d | 54. c |
| 30. d | 55. b |
| 31. c | 56. c |
| 32. c | 57. b |
| 33. c | 58. d |
| 34. d | 59. b |
| 35. b | 60. d |
| 36. a | 61. b |
| 37. d | 62. a |
| 38. d | 63. c |
| 39. c | 64. c |
| 40. b | 65. d |
| 41. a | 66. d |
| 42. c | 67. c |
| 43. b | 68. b |
| 44. c | 69. b |
| 45. c | 70. d |
| 46. b | 71. d |
| 47. b | 72. c |
| 48. a | 73. b |
| 49. d | 74. d |
| 50. a | 75. a |

Section 2 Part B

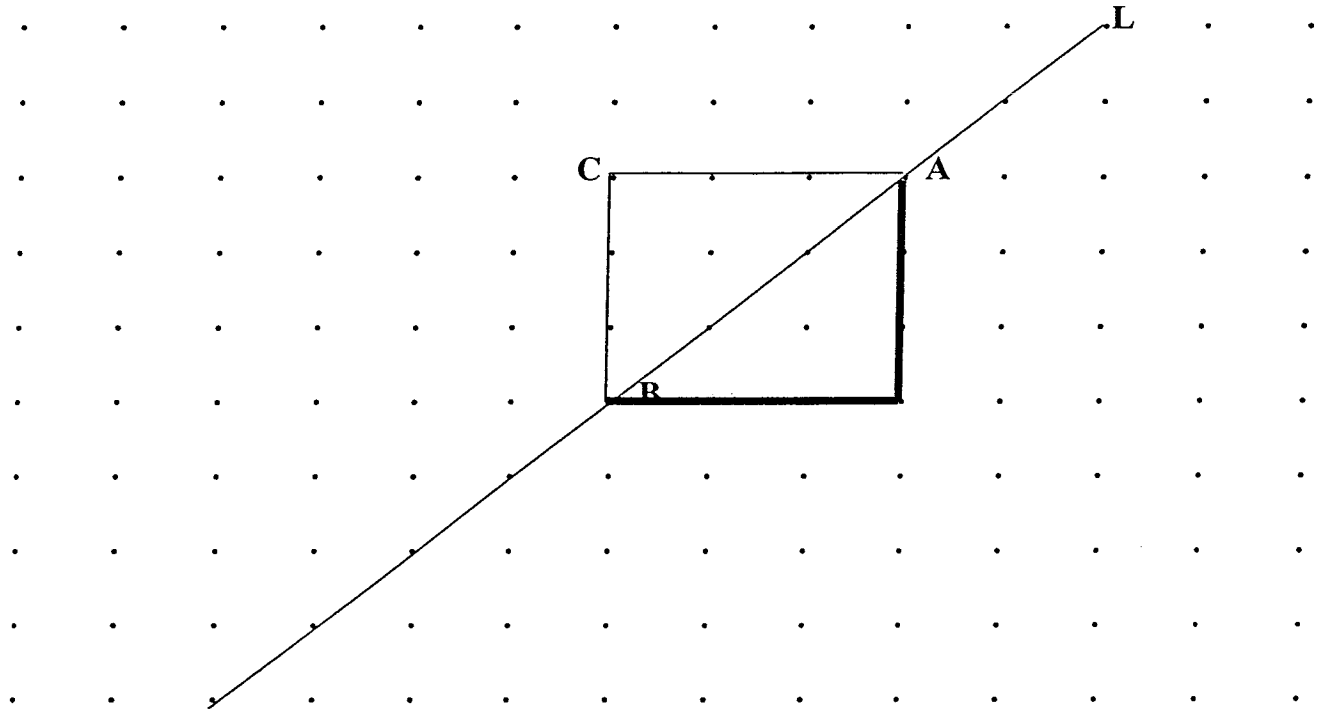
- | | | | | |
|---------------|------------------------|------------------------|-----------------------|------------------------------|
| 76. ac | 77. bc | 78. cd | 79. abc | 80. ac |
| 81. (a) 55 | (b) English | (c) 6 hrs 55 mins | (d) 41 mins | |
| 82. (a) 80 cm | (b) 0.88 m^2 | (c) 1.76 m^3 | (d) rectangular prism | (e) <input type="checkbox"/> |
| 83. (a) 20 | (b) 34.5 | (c) 34 | (d) 90 % | (e) mean |
| 84. (a) 18 | (b) 26 | (c) \$720 | (d) 18 | |

Section 1

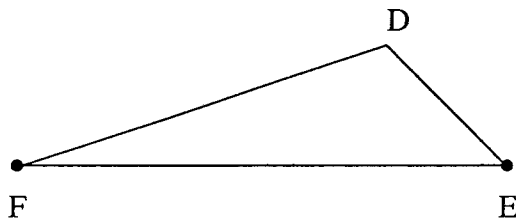
5.



7.



20.



21.

This Year 10 exam, marking guidelines/suggested answers have been produced to help prepare students to the best of our ability. Individual teachers/schools may alter any parts of this product to suit their own requirements