Waverley College
Year 10 Non-Calculator Exam (2006)

TIME ALLOWED: 30 MINUTES

NAME:

TEACHER:

INSTRUCTIONS:

Attempt all questions – answer in the space provided
Write in blue or black pen only
NO CALCULATORS MAY BE USED

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1 Evaluate 400×12

2 $23.5 \div 8$ is 2.9375.

What is the value of $\$23.50 \div 8$ to the nearest 5 cents?

3 Evaluate $35 \div 0.2$

4 Write 7.4265 correct to 2 decimal places

5 Find the value of $2^3 + 3^2$

6 Write a decimal that lies between $\frac{1}{2}$ and $\frac{3}{4}$

7 Evaluate 0.4×0.2

8 $200 \times 15 + 200 \times 7 + 200 \times 8$

9 What was the date 15 days after 20th February 2003?

10 A can of drink costs 80 cents.
How many cans of drink can be bought for $3.20?

11 $5 \div \frac{1}{3} =$

12 $42\times8=336$.

What is the value of 0.42×8?

13 The time on the digital clock appears as

13:53

How many minutes are there until 4pm on the same day?

14 Trent has 40 footy cards. He lost $\frac{1}{4}$ of them and sold 50% of the remaining cards. How many cards did Trent have left?

15 Add $\frac{7}{100}$ to 5.934

16 Complete the table below using the rule $A=n(n-1)$

n	2	4	6
A	2	12	30

17 What number is half-way between $\frac{2}{5}$ and 0.7?

18 The expression $\frac{84}{\Delta+3}$ has a value between 8 and 10.

What is a possible value of Δ?

19 The ratio of boys to girls in an Extension Mathematics class is 4:5. The number of girls increases from 15 to 18.

What is the new ratio of boys to girls?

20 Write $\frac{2}{3}$ as a repeating decimal

21 By how much is $\frac{1}{2}$ greater than $\frac{3}{8}$?

22 If $7! = 7\times6\times5\times4\times3\times2\times1$ and $5! = 5\times4\times3\times2\times1$,

find the value of $\frac{7!}{5!}$

23 Jason is one year older than Mark and one year younger than Dean.

The sum of all their ages is 15.

Calculate the product of their ages.

24 The symbol ψ stands for 'double and add 3'.

For example, $\psi(4) = 2\times4+3$
$= 11$

Evaluate $\psi(8)$

25 Consider the pattern

$3^2 - 2^2 = 3+2 = 5$

$4^2 - 3^2 = 4+3 = 7$

$5^2 - 4^2 = 5+4 = 9$

Use the pattern to complete:

$29^2 - 28^2 = [29]+[28] = [57]$

ANSWERS.

1. 4800
2. $2.95
3. 175
4. 7.43
5. 17
6. Any 0.51 → 0.74
7. 0.08
8. 6000
9. 7th March 2003
10. 4
11. 15
12. 3.36
13. 127 mins
14. 15 cards
15. 6.004
16. 30
17. 0.55
18. Δ is 6 or 7
19. 2 : 3 (12 boys)
20. $0.\dot{6}$
21. $\frac{1}{2} - \frac{3}{8} = \frac{1}{8}$
22. $\frac{7.6.5.4.3.2.1}{5.4.3.2.1} = 42$
23. $(x-1) + x + (x+1) = 15 \quad (x=5)$

    $\therefore$ Ages are 4, 5, 6 product = 120
24. 19
25. $29^2 - 28^2 = [29] + [28] = [57]$