

Name

3rd Year November Assessment

Calculator Paper

30 minutes

1) (a) Simplify $3a + 7b - a + 4b$ (2)

(b) Expand $4(2d + 5)$ (2)

(c) Factorise $15x + 18x^2y$ (2)

2) Circle the number written in standard form. (Total 6 marks)

0.5×10^4 5×10^{-4} 50×10^4 $5 \times 10^{0.4}$

(Total 1 mark)

3) Circle the expression that is equivalent to $(4a^5)^2$

$16a^{10}$ $16a^7$ $8a^{10}$ $8a^7$

(Total 1 mark)

4) Circle the highest common factor (HCF) of $6xy^2$ and $4x^3y$

$2xy^2$ $2xy$ $12x^3y^2$ $24x^4y^3$

(Total 1 mark)

5) Increase 4200 by 38%

(Total 2 marks)

- 6) David invests £5000 in a savings account.
The account pays 3.2% compound interest per year.

Work out the value of his investment after 3 years.
Give your answer to the nearest penny.

- 7) Expand and simplify

$$(x + 2)(x - 3)(x + 4)$$

(Total 4 marks)

(Total 3 marks)

- 8) Kris is simplifying $3n^5 \times 2n^4$
His answer is $5n^{20}$

Identify two mistakes he has made.

- 9) Expand and simplify $(3x^2 + 2)(2x + 5) - 6x(x^2 - 3)$

(Total 2 marks)

(Total 4 marks)

10) Solve for x

$$5 - 2x = 3(x - 7)$$

(Total 3 Marks)

11) Here is some information about tourism in 2012

Country visited	Number of tourists	Total spent by tourists (\$)
France	8.30×10^7	5.360×10^{10}
USA	6.70×10^7	1.262×10^{11}
Spain	5.77×10^7	5.590×10^{10}

21% of the total spent by tourists in the USA was by Canadians.

34% of tourists in the USA were Canadians.

Work out the average amount spent per Canadian tourist in the USA.

(Total 3 mark)

