ADRIATIC
C O L L E G E

Pearson:
iLowerSecondary Three Mathematics Demo Entrance Test

Pearson | Edexcel   **ADRIATIC** COLLEGE

iLowerSecondary 3

Candidate's name _____

· *Answer all questions.*
· *Time allocated is 1 hour.*
· *The total mark for this paper is 23.*
· *The marks for each question are shown in brackets.*
· *Candidates may NOT use a calculator and may use pen, pencil, ruler and eraser.*

1.   [2] Simplify these:

a) $-27xy^8z^{17} \div (-3yz^5)^2$

b) $2a(a - 6)^2 + (a - 11)(a + 11)$

2.   [3] Factorize these:

a) $15a^3b^2c - 60ab^2c$

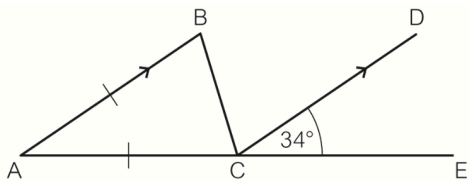b) $a^4 - 2a^2b^2 + b^4 - 9$

3. [2] Solve these equations simultaneously:

$$y = 2x - 1$$
$$-2x + 3y = 9$$

4. [2] Jasmina, Fatima and Laila share $144 000 in the ratio 5 : 3 : 4.
Calculate how much Jasmina receives.
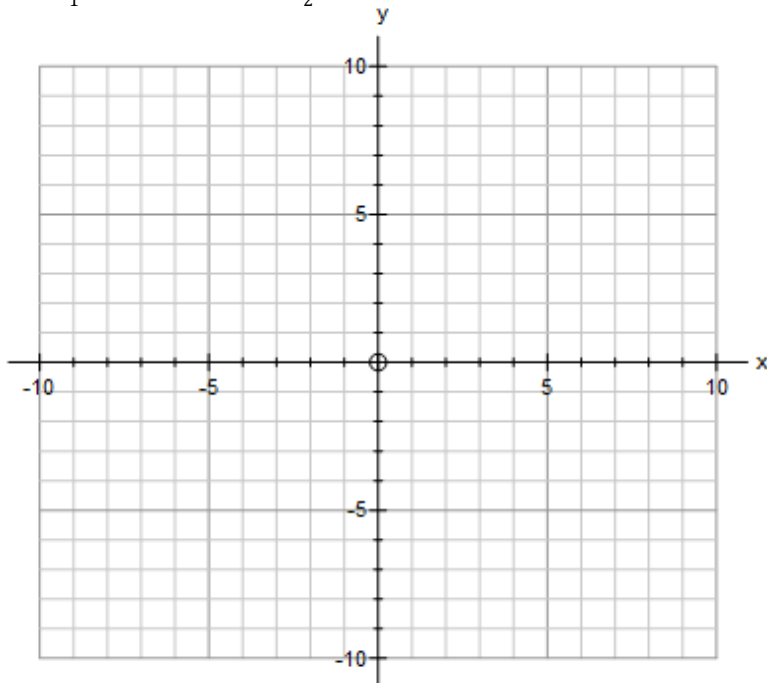
5. [3] ABC is an isosceles triangle.

CD is parallel to AB.
Find the size of angle BCD.

6. [6] On the same set of axes draw the graphs
$y_1 = 3x - 6$ and $y_2 = 9 - 2x$

a) Find the point of intersection of two graphs.
b) Find the points of intersection of these graphs with x-axis.
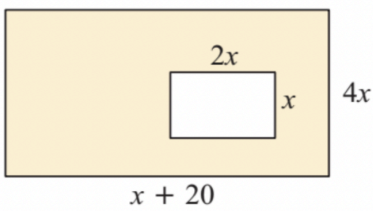c) Show that the point $(5, -1)$ lies on the line y_2.

7. [2] The table shows information about the number of letters in the first 60 words in a children's book.

Number of letters	Frequency
1	2
2	5
3	14
4	19
5	10
6	10

Work out the mean number of letters.

8. [3] Find the area A of the following shaded regions if all measurements are in cm:

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