

Q1.

Solve the equation $\frac{1}{x-2} - \frac{1}{x-1} = 2$

Give your answers to 2 decimal places.

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Answer

(Total 6 marks)

Q2.

(a) Factorise $3x^2 - 13x - 10$

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Answer

(2)

(b) Simplify $\frac{3x^2 - 15x}{3x^2 - 13x - 10}$

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Answer

(2)
(Total 4 marks)

Q3.

(a) Expand and simplify $(5x - 2y)(x + 2y)$

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Answer

(3)

(b) Solve $x^2 - 2x - 2 = 0$
Give your answers to 1 decimal place.

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Answer

(3)

(c) Simplify $\frac{3x^2 - x - 10}{x^2 - 4}$

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Answer

(3)

(Total 9 marks)

Q4.Simplify $\frac{5x^2 + 17x - 12}{x^2 - 16}$

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Answer

(Total 3 marks)

Q5.

(a) Simplify fully $\frac{8c^7}{15d^6} \div \frac{6c^2}{5d^3}$

Answer

(3)

(b) Write as a single fraction $\frac{5}{m+1} + \frac{6}{m-4}$

Give your answer in its simplest form.

Answer

(4)
(Total 7 marks)

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Answer

(5)
 (Total 7 marks)

Q9. n is an integer.

Show that $\frac{n(n-1)}{2} + \frac{n(n+1)}{2}$ is a square number.

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(Total 3 marks)

Q10. Solve the equation $\frac{5}{x+2} + \frac{4}{x+1} = 2$

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Answer

(Total 6 marks)