



Algebraic Fractions (Simplifying)



SCAN ME

REVISE THIS TOPIC

CHECK YOUR ANSWERS

SCAN ME

1 Simplify fully $\frac{3a + 9}{a^3 + 3a^2}$

.....
(Total for Question 1 is 2 marks)

2 Simplify fully $\frac{2x^2 - 2xy}{xy^4 - y^5}$

.....
(Total for Question 2 is 2 marks)

3 Simplify fully $\frac{3b + b^3}{4b^2 + 12}$

.....
(Total for Question 3 is 2 marks)



4 Simplify fully $\frac{10n^2 - 90}{2n - 6}$

.....
(Total for Question 4 is 2 marks)

5 Simplify fully $\frac{4k^2 - 1}{6k^3 - 3k^2}$

.....
(Total for Question 5 is 2 marks)

6 Simplify fully $\frac{4c^3 - 100c}{4c + 20}$

.....
(Total for Question 6 is 2 marks)



7 Simplify fully $\frac{2x^2 - 32}{x^2 + 9x + 20}$

.....
(Total for Question 7 is 3 marks)

8 Simplify fully $\frac{a^2 - 11a + 30}{a^2 - 12a + 36}$

.....
(Total for Question 8 is 3 marks)

9 Simplify fully $\frac{y^2 - 7y - 18}{y^2 - 81}$

.....
(Total for Question 9 is 3 marks)



10 Simplify fully $\frac{9x^2 - 25}{3x^2 + 14x + 15}$

.....
(Total for Question 10 is 3 marks)

11 Simplify fully $\frac{4y^2 - 9}{2y^2 - 11y + 12}$

.....
(Total for Question 11 is 3 marks)

12 Simplify fully $\frac{n^2 + 11n + 24}{5n^2 + 22n + 21}$

.....
(Total for Question 12 is 3 marks)



13 Simplify fully $\frac{45 - 20x^2}{2x^2 + 5x + 3}$

.....
(Total for Question 13 is 3 marks)

14 Simplify fully $\frac{3x^2 + 19x + 6}{9x^2 + 6x + 1}$

.....
(Total for Question 14 is 3 marks)

15 Simplify fully $\frac{3x^2 - 300}{6x^2 + 55x - 50}$

.....
(Total for Question 15 is 3 marks)



16 Show that $\frac{12x - 36}{x^2 + 5x} \times \frac{x^2 + 9x + 20}{3x - 9}$ can be written in the form $a + \frac{b}{x}$
where a and b are integers.

(Total for Question 16 is 4 marks)

17 Show that $10x - 35 \div \frac{2x^2 - 15x + 28}{2x^2 - 32}$ can be written in the form $ax + b$
where a and b are integers.

(Total for Question 17 is 4 marks)



18 Show that $9x^{-3} \times \frac{3x^5 + 10x^4}{9x^2 - 100} \div \frac{x^2}{6x - 20}$ can be written in the form $\frac{a}{x}$

where a is an integer.

(Total for Question 18 is 4 marks)

19 $2x - \frac{x^3 - x^2}{x^2 + 2x - 3} \times \frac{2x^2 - 1}{x^2}$ can be written in the form $\frac{ax + b}{x + 3}$

where a and b are integers. Work out the values of a and b .

$a = \dots\dots\dots$

$b = \dots\dots\dots$

(Total for Question 19 is 4 marks)

