

Operations on Algebraic Fractions

1. Jan 2019 (1H) Q11

(b) Express $\frac{1}{9x^2 - 25} - \frac{1}{6x + 10}$ as a single fraction in its simplest form.

2. Jan 2019 (2HR) Q10

(b) Solve $\frac{8 - 2x}{3} - \frac{2x - 3}{2} = 4$

Show clear algebraic working.

$x =$

(3)

3. Jan 2018 (3H) Q12

Solve $\frac{x+4}{3} + \frac{2x+3}{4} = 7$

Show clear algebraic working.

$x = \dots\dots\dots$

(Total for Question 12 is 3 marks)

4. June 2016 (4H) Q15

(a) Write $\frac{x+3}{5} + \frac{x-2}{3}$ as a single fraction in its simplest form.

[3 marks]

5. Jan 2017 (4HR) Q15

(c) Simplify fully $\frac{3}{x+1} - \frac{2}{x-1}$

[3 marks]

6. June 2017 (3H) Q22

Simplify fully $\frac{3}{2x+12} - \frac{x-15}{x^2-2x-48}$

Show clear algebraic working.

[5 marks]

7. June 2018 (1H) Q15

(b) Express $\frac{1}{9x^2 - 25} - \frac{1}{6x + 10}$ as a single fraction in its simplest form.

[3 marks]

8. June 2018 (2HR) Q22

Express $\frac{4x^2 - 25}{5x^2 + 2x - 7} \times \left(\frac{2}{x - 3} - \frac{3}{2x - 5} \right)$ as a single fraction in its simplest form.

[4 marks]

9. June 2018 (3H) Q15

(a) Write $\frac{2}{x} - \frac{1}{x+3}$ as a single fraction in its simplest form.

[3 marks]

10. June 2018 (3HR) Q17

(a) Show that $\frac{x+1}{2x+1} - \frac{1}{(2x+1)(x+1)} = \frac{x^2+2x}{(2x+1)(x+1)}$

[2 marks]

11. June 2018 (4H) Q12

Express $\frac{x-3}{2} - \frac{x+4}{3}$ as a single fraction.

Give your answer in its simplest form.

[3 marks]

12. June 2018 (4HR) Q21

Express $\frac{x+3}{x-4} - \frac{x+4}{x-3}$ as a single fraction.

Simplify your answer.

[3 marks]

13. Jan 2019 (1H) Q11

Express $\frac{5}{3} - \frac{x+2}{2x}$ as a single fraction in its simplest terms.

[3 marks]

14. Nov 2009 (3H) Q19

Simplify $\frac{2}{2x-1} - \frac{1}{x+1}$

(4 marks)

15. May 2010 (4H) Q11

Simplify fully $\frac{x}{6} + \frac{3x}{4}$

(3 marks)

16. Nov 2008 (3H) Q18

Simplify fully $\frac{2}{x+2} + \frac{x}{x^2+5x+6}$

(5 marks)

17. May 2005 (3H) Q22

Simplify fully $\frac{2}{x-1} + \frac{x-11}{x^2+3x-4}$

(6 marks)

18. Nov 2010 (4H) Q22

Simplify fully $1 + \frac{x^2+x-6}{(x+4)(x-2)}$

(4 marks)

19. Nov 2007 (3H) Q16

Simplify

a. $\frac{x^2-3x}{2x-6}$

(3 marks)

b. $\frac{2}{x-1} - \frac{3}{x}$

(3 marks)

20. Jan 2012 (3H) Q20

Simplify fully $\frac{4}{x} + \frac{3}{2-x}$

(3 marks)