

Name: \_\_\_\_\_

Level 2 Further Maths

**Algebraic Fractions**



Corbettmaths

Ensure you have: Pencil or pen

### Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Revision for this topic

[www.corbettmaths.com/more/further-maths/](http://www.corbettmaths.com/more/further-maths/)



1. Simplify  $\frac{(x - y)^3}{(x - y)}$

.....  
**(1)**

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2. Simplify  $\frac{x^2 + 2x - 24}{x^2 - 11x + 28}$

.....  
**(2)**

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3. Simplify  $\frac{35x - 14y}{15x^2 - 6xy^2}$

.....  
**(3)**

4. Simplify  $\frac{2x^2 - 19x + 24}{2x^2 - x - 3}$

.....  
**(3)**

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5. Simplify  $\frac{2y - 2y^3}{y^2 + y}$

.....  
**(4)**

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6. Simplify  $\frac{27x^3 - 12x}{3x(12x^2 + 5x - 2)}$

.....  
**(4)**

7. Work out  $\frac{3}{4x^2} + \frac{5}{3x}$

Give your answer as a single fraction in its simplest form.

.....  
(2)

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8. Work out  $\frac{6a^3b^2}{8} \times \frac{8}{ab^4}$

Give your answer as a single fraction in its simplest form.

.....  
(2)

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9. Work out  $\frac{xyz}{w} \div \frac{wy}{xz}$

Give your answer as a single fraction in its simplest form.

.....  
(2)

10. Work out  $\frac{ac}{5} + \frac{4}{c}$

Give your answer as a single fraction in its simplest form.

.....  
(2)

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11. Work out  $\frac{5}{12x} + \frac{3}{4x^2}$

Give your answer as a single fraction in its simplest form.

.....  
(3)

12. Work out  $\frac{1-x}{x+7} - \frac{4}{x-2}$

Give your answer as a single fraction in its simplest form.

.....  
**(3)**

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13. Simplify  $\frac{14}{x^2 - 5x + 6} \div \frac{7}{x^2 + 3x - 10}$

.....  
**(4)**

14. Simplify  $\frac{3x^2 + 8x - 3}{25} \times \frac{30}{6x^2 + 13x - 5}$

.....  
(5)

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15. Simplify  $\frac{x^3 - x}{x + 2} \div \frac{x^2 - x}{x^2 - 5x - 14}$

.....  
(5)

16. Simplify  $\frac{x+3}{x^3} \times \frac{x^7}{x+6} \div \frac{x^2}{5x+30}$

.....  
(4)

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17. Solve  $\frac{25x}{54} = \frac{4}{5x^2}$

.....  
(3)



18. Solve  $\frac{2x-5}{7} - \frac{2x-1}{2} = 3$

.....  
**(4)**

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19. Solve  $\frac{x+1}{2} + \frac{2x-1}{4} + \frac{x+2}{3} = 1$

.....  
**(4)**

20. Solve  $\frac{6}{x+1} - \frac{1}{x+1} = 3$

.....  
(4)

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21. Solve  $\frac{2}{2x-3} - \frac{3}{x+4} = 2$

Give your solutions to 3 significant figures

.....  
(5)

22. Solve  $\frac{x+1}{x-3} + \frac{2}{x-4} = 2$

Give your solutions to 3 significant figures

.....  
(5)

23.  $A = \frac{8}{x+1}$  and  $B = \frac{2x+5}{x}$

Given  $5 - A - B = 0$

Work out the possible values of  $x$ .  
Give your solutions to two decimal places.

.....  
**(6)**

