Skill: Writing compound expressions as partial fractions

Questions

Attempt these questions independently showing full and clear solutions. Check each answer as you go.

1. Write the following compound expressions as partial fractions:

a. $\frac{2x+5}{(x-1)(x+6)}$	b. $\frac{3t+5}{(t+1)(t+2)}$
C. $\frac{6x}{x^2-9}$	d. $\frac{4r-18}{4r^2+4r-3}$
e. $\frac{6x^2 + 27x + 25}{(x+2)^2(x+1)}$	f. $\frac{97x+35}{(2x-3)(5x+2)^2}$
g. $\frac{16}{t^2(t+4)}$	

2. Write
$$\frac{2x^2 + 18x + 24}{(x+1)(x+3)}$$
 in the form $A + \frac{B}{x+1} + \frac{C}{x+2}$.

3. Write $\frac{12x^3 + 2x^2 - 3x - 5}{(2x+1)(x-1)}$ in the form $Ax + B + \frac{C}{2x+1} + \frac{D}{x-1}$.

4. Write
$$\frac{3x^3 - 12x + 9}{x^2 - 9}$$
 in the form $Ax + B + \frac{C}{x + 3} + \frac{D}{x - 3}$.

5. Write
$$\frac{2x^3 + 8x^2 - 6x + 20}{(x+2)^2}$$
 in the form $Ax + B + \frac{C}{x+2} + \frac{D}{(x+2)^2}$

ALevelMathsRevision.com

© 2021 Steve Tipple – This material may not be reproduced without the written permission of Steve Tipple and ALevelMathsRevsion.com