

# Factorising

2008 PI	<p>2. Factorise fully</p> $5x^2 - 45.$	2	
Ans	$5(x - 3)(x + 3)$		
2006 PI	<p>5. (a) Factorise</p> $4x^2 - y^2.$ <p>(b) Hence simplify</p> $\frac{4x^2 - y^2}{6x + 3y}.$	1	
		2	
Ans	<p>(a) <math>(2x - y)(2x + y)</math>    (b) <math>\frac{2x - y}{3}</math></p>		
2003 PI	<p>5. Factorise</p> $2x^2 - 7x - 15.$	2	
Ans	$(2x + 3)(x - 5)$		
2002 PI	<p>5. (a) Factorise <math>p^2 - 4q^2</math>.</p> <p>(b) Hence simplify</p> $\frac{p^2 - 4q^2}{3p + 6q}.$	1	
		2	
Ans	<p>5. (a) <math>(p - 2q)(p + 2q)</math></p> <p>(b) <math>\frac{(p - 2q)(p + 2q)}{3(p + 2q)} = \frac{p - 2q}{3}</math></p>		
2001 PI	<p>6. A is the point <math>(a^2, a)</math>.</p> <p>T is the point <math>(t^2, t)</math>, <math>a \neq t</math></p> <p>Find the gradient of the line AT.</p> <p>Give your answer in its simplest form.</p>	3	
Ans	$\frac{1}{t + a}$		

<i>2000 P1</i>	<b>4.</b> (a) Factorise $x^2 - 16$ .	1	
<i>Ans</i>	$(x - 4)(x + 4)$		