



# Timester Challenge

## Factorising Linear Expressions



<p>Factorise</p> <p>1) <math>5j + 15</math></p> <p>2) <math>6f - 15</math></p> <p style="text-align: right;"><b>Bronze</b> ★</p>	<p>Factorise the following expressions fully.</p> <p>1) <math>3xy + 6y</math></p> <p>2) <math>15x^2y + 18xy</math></p> <p style="text-align: right;"><b>Silver</b> ★</p>	<p>The area of the rectangle is <math>4x^2 + 12x</math>. List all the possible dimensions the rectangle could have in terms of <math>x</math>.</p>
<p>Factorise</p> <p>1) <math>y^2 + 18y</math></p> <p>2) <math>3xy + 4x^2</math></p> <p style="text-align: right;"><b>Bronze</b> ★</p>	<p>Circle the fully factorised answer of <math>4y^2 - 16y</math>.</p> <p>Circle the correct answer</p> <p style="text-align: center;"><math>y(4y - 16)</math>      <math>4(y + 2)(y - 2)</math></p> <p style="text-align: center;"><math>(2y + 4)(2y - 4)</math>      <math>4(y^2 - 4)</math></p> <p style="text-align: center;"><math>4y(y - 4)</math>      <math>4y(y + 4)</math></p> <p style="text-align: right;"><b>Silver</b> ★</p>	<div style="border: 2px solid black; background-color: #e91e63; color: white; padding: 10px; text-align: center;"><p>Area <math>4x^2 + 12x</math></p></div> <p style="text-align: right;"><b>Gold</b> ★</p>



# Timester Challenge

## Factorising Linear Expressions



<p>Factorise</p> <p>1) <math>5j + 15 = 5(j + 3)</math></p> <p>2) <math>6f - 15 = 3(2f - 5)</math></p> <p style="text-align: right;"><b>Bronze</b> ★</p>	<p>Factorise the following expressions fully.</p> <p>1) <math>3xy + 6y = 3y(x + 2)</math></p> <p>2) <math>15x^2y + 18xy = 3xy(5x + 6)</math></p> <p style="text-align: right;"><b>Silver</b> ★</p>	<p>The area of the rectangle is <math>4x^2 + 12x</math>. List all the possible dimensions the rectangle could have in terms of <math>x</math>.</p> <table border="1" data-bbox="1607 575 2412 978"> <thead> <tr> <th>Option</th> <th>Factorised</th> <th>Dimension 1</th> <th>Dimension 2</th> </tr> </thead> <tbody> <tr> <td>A</td> <td><math>1(4x^2 + 12x)</math></td> <td>1</td> <td><math>4x^2 + 12x</math></td> </tr> <tr> <td>B</td> <td><math>2(2x^2 + 6x)</math></td> <td>2</td> <td><math>2x^2 + 6x</math></td> </tr> <tr> <td>C</td> <td><math>4(x^2 + 3x)</math></td> <td>4</td> <td><math>x^2 + 3x</math></td> </tr> <tr> <td>D</td> <td><math>x(4x + 3)</math></td> <td><math>x</math></td> <td><math>4x + 3</math></td> </tr> <tr> <td>E</td> <td><math>2x(2x + 6)</math></td> <td><math>2x</math></td> <td><math>2x + 6</math></td> </tr> <tr> <td>F</td> <td><math>4x(x + 3)</math></td> <td><math>4x</math></td> <td><math>x + 3</math></td> </tr> </tbody> </table>	Option	Factorised	Dimension 1	Dimension 2	A	$1(4x^2 + 12x)$	1	$4x^2 + 12x$	B	$2(2x^2 + 6x)$	2	$2x^2 + 6x$	C	$4(x^2 + 3x)$	4	$x^2 + 3x$	D	$x(4x + 3)$	$x$	$4x + 3$	E	$2x(2x + 6)$	$2x$	$2x + 6$	F	$4x(x + 3)$	$4x$	$x + 3$
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<p>Factorise</p> <p>1) <math>y^2 + 18y = y(y + 18)</math></p> <p>2) <math>3xy + 4x^2 = x(3y + 4x)</math></p> <p style="text-align: right;"><b>Bronze</b> ★</p>	<p>Circle the fully factorised answer of <math>4y^2 - 16y</math>.</p> <p>Circle the correct answer</p> <p style="text-align: center;"> <math>y(4y - 16)</math>      <math>4(y + 2)(y - 2)</math>  <math>(2y + 4)(2y - 4)</math>      <math>4(y^2 - 4)</math>  <span style="border: 1px solid red; border-radius: 50%; padding: 2px;"><math>4y(y - 4)</math></span>      <math>4y(y + 4)</math> </p> <p style="text-align: right;"><b>Silver</b> ★</p>	<div style="border: 2px solid black; background-color: #e91e63; color: white; padding: 10px; text-align: center;"> <p>Area <math>4x^2 + 12x</math></p> </div> <p style="text-align: right;"><b>Gold</b> ★</p>																												