

LATIHAN TAMBAHAN

2.2 PEMFAKTORAN / 2.2 FACTORISATION

1. Faktorkan setiap yang berikut :

Factorise each of the following :

- a. $xy - y^2 - 4x + 4y$ = _____
- b. $bm - bn + cm - cn$ = _____
- c. $pq - p^2 + 3q - 3p$ = _____
- d. $4x + 16$ = _____
- e. $16y^2 - 64y$ = _____
- f. $a^2 - 1$ = _____
- g. $81x^2 - 100$ = _____
- h. $16z^2 - 100$ = _____
- i. $169u^2 - 225$ = _____
- j. $243g^2 - 48g$ = _____

2. Lengkapkan pendaraban silang bagi setiap pemfaktoran berikut :

Complete the cross multiplication for each of the following factorisation :

<p>a. $y^2 - 8y + 15 =$</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">y^2</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">15</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">$-8y$</td> </tr> </table> <p>$y^2 - 8y + 15 =$</p>							y^2	15	$-8y$	<p>b. $x^2 - 2x - 8 =$</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">x^2</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">-8</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">$-2x$</td> </tr> </table> <p>$x^2 - 2x - 8 =$</p>							x^2	-8	$-2x$
y^2	15	$-8y$																	
x^2	-8	$-2x$																	
<p>c. $p^2 - 4p - 12 =$</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">p^2</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">-12</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">$-4p$</td> </tr> </table> <p>$p^2 - 4p - 12 =$</p>							p^2	-12	$-4p$	<p>d. $x^2 - 3x + 2 =$</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">x^2</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">2</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">$-3x$</td> </tr> </table> <p>$x^2 - 3x + 2 =$</p>							x^2	2	$-3x$
p^2	-12	$-4p$																	
x^2	2	$-3x$																	
<p>e. $6m^2 - m - 2 =$</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">$6m^2$</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">-2</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">$-m$</td> </tr> </table> <p>$6m^2 - m - 2 =$</p>							$6m^2$	-2	$-m$	<p>f. $y^2 - 9y + 20 =$</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">y^2</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">20</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">9y</td> </tr> </table> <p>$y^2 - 9y + 20 =$</p>							y^2	20	9y
$6m^2$	-2	$-m$																	
y^2	20	9y																	

<p>g. $-6x^2 - 7x + 5$</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">$-6x^2$</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">5</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">$-7x$</td> </tr> </table> <p style="margin-left: 40px;">$-6x^2 - 7x + 5 =$</p>							$-6x^2$	5	$-7x$	<p>h. $n^2 + 7n - 10$</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">n^2</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">-10</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">$7n$</td> </tr> </table> <p style="margin-left: 40px;">$n^2 + 7n - 10 =$</p>							n^2	-10	$7n$
$-6x^2$	5	$-7x$																	
n^2	-10	$7n$																	
<p>i. $x^2 + 5x + 6$</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">x^2</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">6</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">$5x$</td> </tr> </table> <p style="margin-left: 40px;">$x^2 + 5x + 6 =$</p>							x^2	6	$5x$	<p>j. $4x^2 - 12x + 9$</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> <td style="border: 1px solid black; width: 40px; height: 30px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">$4x^2$</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">9</td> <td style="border: 1px solid black; width: 40px; height: 30px; text-align: center;">$-12x$</td> </tr> </table> <p style="margin-left: 40px;">$4x^2 - 12x + 9 =$</p>							$4x^2$	9	$-12x$
x^2	6	$5x$																	
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