

NAME:

DATE:

**A2.Q2.BERMELLEEMBO: FACTORING – MATCHING
(DAY EP3)
EXPRESSIONS**

NOTES

MATCH EACH SIMPLIFIED EXPRESSION TO ITS FACTORED FORM

SIMPLIFIED EXPRESSIONS

- | | | |
|-------------------------------|-------------------------------|-------------------------------|
| 1. $5x^2 + 11x - 12$ <u>G</u> | 2. $5x^2 - 17x - 12$ <u>B</u> | 3. $5x^2 - 19x + 12$ <u>F</u> |
| 4. $5x^2 + 17x - 12$ <u>D</u> | 5. $5x^2 + 28x - 12$ <u>C</u> | 6. $5x^2 - 16x + 12$ <u>X</u> |
| 7. $5x^2 - 28x - 12$ <u>E</u> | 8. $5x^2 + 7x - 12$ <u>H</u> | 9. $5x^2 - 59x - 12$ <u>A</u> |

FACTORED EXPRESSIONS

<p>A. $(5x+1)(x-12)$</p> $5x^2 - 60x + 1x - 12$ <table> <tr> <td><u>F</u></td> <td><u>M</u></td> <td><u>L</u></td> </tr> <tr> <td>$5x^2$</td> <td>$-60x$</td> <td>-12</td> </tr> <tr> <td></td> <td>$+ 1x$</td> <td></td> </tr> </table> $5x^2 - 59x - 12$	<u>F</u>	<u>M</u>	<u>L</u>	$5x^2$	$-60x$	-12		$+ 1x$		<p>B. $(5x+3)(x-4)$</p> <table> <tr> <td><u>F</u></td> <td><u>M</u></td> <td><u>L</u></td> </tr> <tr> <td>$5x^2$</td> <td>$-20x$</td> <td>-12</td> </tr> <tr> <td></td> <td>$+ 3x$</td> <td></td> </tr> </table> $5x^2 - 17x - 12$	<u>F</u>	<u>M</u>	<u>L</u>	$5x^2$	$-20x$	-12		$+ 3x$		<p>C. $(5x-2)(x+6)$</p> <table> <tr> <td><u>F</u></td> <td><u>M</u></td> <td><u>L</u></td> </tr> <tr> <td>$5x^2$</td> <td>$+30x$</td> <td>-12</td> </tr> <tr> <td></td> <td>$- 2x$</td> <td></td> </tr> </table> $5x^2 + 28x - 12$	<u>F</u>	<u>M</u>	<u>L</u>	$5x^2$	$+30x$	-12		$- 2x$	
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First Middle Last

Reminder $\rightarrow i^2 = -1$

10. Simplify the expression that includes the imaginary number i . BOX ANSWERS

A. $(2i+3)(i-4)$

$$= 2i^2 - 8i + 3i - 12$$

combine

$$= 2(-1) - 5i - 12$$

$$= -2 - 5i - 12$$

combine like terms

$$= -14 - 5i$$

B. $(4i-7)(4i+7)$

$$= 16i^2 + 28i - 28i - 49$$

cancel

$$= 16(-1) - 49$$

combine like terms

$$= -16 - 49$$

$$= -65$$

11. Simplify each radical expression in terms of the imaginary number i . BOX ANSWERS

A. $\sqrt{-200}$

$$= \sqrt{100} i \sqrt{2}$$

$$= 10i\sqrt{2}$$

B. $2\sqrt{-48}$

$$= \sqrt{16} i \sqrt{3}$$

$$= 4i\sqrt{3}$$

12. What is the correct factorization of $2x^2 - 13x - 24$? SHOW WORK

	<u>F</u>	<u>M</u>	<u>L</u>	
A. $(2x+3)(x+8)$			+	No +24
B. $(2x-3)(x-8)$			+	No +24
C. $(2x+1)(x+24)$		$+48x - 1x = 47x$	-	(Need to be Negative)
D. $(2x+3)(x-8)$		$-16x + 3x = -13x$	-	
E. $(2x+1)(x-24)$		$-48x + 1x = -47x$	-	
F. $(2x-3)(x+8)$		$+16x - 3x = +13x$	-	

2x

all