

NAME:

DATE:

A2.Q2.BERMELLEEMBO

(DAY EP5)

EXPRESSIONS

REVIEW NOTES

Factor Each Polynomial: BOX YOUR ANSWER

1. $5x^2 + 9x - 2$

F	M	L
$5x^2$	$+9x$ Bigger # is +	-2 Different signs
$5x \cdot x$		$-1 \cdot 2$ $+2 \cdot -1$

} Try These

$$(5x - 1)(x + 2)$$

$$\begin{array}{r} -1x \\ +10x \\ \hline +9x \end{array} \text{ yes}$$

$$(5x + 2)(x - 1)$$

$$\begin{array}{r} +2x \\ -5x \\ \hline -3x \end{array} \text{ NO}$$

2. $3x^2 - 23x - 8$

F	M	L
$3x^2$	$-23x$ Bigger # is -	-8 Different signs
$3x \cdot x$		$+1 \cdot -8$ $-8 \cdot +1$ $+2 \cdot -4$ $-4 \cdot +2$

} Try These

$$(3x + 1)(x - 8)$$

$$\begin{array}{r} +1x \\ -24x \\ \hline -23x \end{array} \text{ yes}$$

$$(3x - 8)(x + 1)$$

$$\begin{array}{r} -8x \\ +3x \\ \hline -5x \end{array} \text{ NO}$$

$$(3x + 2)(x - 4)$$

$$\begin{array}{r} +2x \\ -12x \\ \hline -10x \end{array} \text{ NO}$$

$$(3x - 4)(x + 2)$$

$$\begin{array}{r} -4x \\ +6x \\ \hline +2x \end{array} \text{ NO}$$

3. $x^2 - 10x + 21$

F	M	L
x^2	$-10x$	$+21$
	Bigger # is -	Same signs
$x \cdot x$		$-1 \cdot 21$ $-3 \cdot 7$

} Try
These

$$(x-1)(x-21)$$

$$\begin{array}{r} -1x \\ -21x \\ \hline -22x \end{array} \text{ NO}$$

$$(x-3)(x-7)$$

$$\begin{array}{r} -3x \\ -7x \\ \hline -10x \end{array} \text{ YES}$$

4. $x^2 + x - 2$

F	M	L
x^2	$+x$	-2
	Bigger # is +	Different signs
$x \cdot x$		$-1 \cdot 2$

$$(x-1)(x+2)$$

$$\begin{array}{r} -1x \\ +2x \\ \hline +1x \end{array} \text{ YES}$$

5. $x^2 - 9$

F	M	L
x^2	$+0x$	-9
$x \cdot x$	always one + one -	$+3-3$

$$(x+3)(x-3)$$

~~6. $25x^2 - 4$~~ $49x^2 - 16$

F	M	L
$49x^2$	$+0x$	-16
$7x \cdot 7x$	always one + one -	$+4-4$

$$(7x+4)(7x-4)$$

~~7. $4x^2 - 9$~~ $81x^2 - 4$

F	M	L
$81x^2$	$+0x$	-4
$9x \cdot 9x$	always one + one -	$+2-2$

$$(9x+2)(9x-2)$$

Simplify each expression

8. $(6x+5)(2x-1)$

combine

$$12x^2 - 6x + 10x - 5$$
$$12x^2 + 4x - 5$$

9. $3\sqrt{50}$

$$3\sqrt{25}\sqrt{2}$$
$$3 \cdot 5\sqrt{2}$$
$$15\sqrt{2}$$

Simplify the expression with imaginary number i

10.

$$(7i+2)(3i-4)$$

$$21\overset{\text{combine}}{i^2} - 28i + 6i - 8$$

$$21(-1) - 22i - 8$$

$$\boxed{-21} - 22i \boxed{-8} \text{ combine like terms}$$

$$\boxed{-13 - 22i}$$

11. $6\sqrt{-8}$

$$6\sqrt{4}i\sqrt{2}$$

$$6 \cdot 2i\sqrt{2}$$

$$\boxed{12i\sqrt{2}}$$