

## Review Page 2

1.  $7(u^2 - uv + 5v^2)$

$$7u^2 - 7uv + 35v^2$$

2.  $6y(6x^2 + 2xy + 4y^2)$

$$36x^2y + 12xy^2 + 24y^3$$

3.  $4(a^2 + 8ab + 2b^2)$

$$4a^2 + 32ab + 8b^2$$

$$4. 6(3x^2 + 8xy + 3y^2)$$

$$18x^2 + 48xy + 18y^2$$

$$5. (3x - 8y)(6x - 2y)$$

$$18x^2 - 6xy - 48xy + 16y^2$$

$$18x^2 - 54xy + 16y^2$$

$$6. (5m - 3n)(3m + n)$$

$$15m^2 + 5mn - 9mn - 3n^2$$

$$15m^2 - 4mn - 3n^2$$

$$7. (4a - 6b)(3a - b)$$

$$12a^2 - 4ab - 18ab + 6b^2$$

$$12a^2 - 22ab + 6b^2$$

$$12a^2 - 4ab - 18ab + 6b$$

$$12a^2 - 22ab + 6b^2$$

$$8. (4x+1)(6x^2-2x-8)$$

$$24x^3 - \underline{8x^2} - \underline{32x} + \underline{6x^2} - \underline{2x} - 8$$

$$24x^3 - 2x^2 - 34x - 8$$

$$9. (2n-1)(7n^2-2n-6)$$

$$14n^3 - \underline{4n^2} (-12n) - \underline{7n^2} (+2n) + 6$$

$$14n^3 - 11n^2 - 10n + 6$$

$$10. (4a-4)(7a^2-4a-2)$$

$$28a^3 - \underline{16a^2} - \underline{8a} - \underline{28a^2} + \underline{16a} + 8$$

$$28a^3 - 44a^2 + 8a + 8$$

Common Factor

$$11. 18xy^2 + 6x^2 + 6xy + 9x$$

$$3x(6y^2 + 2x + 2y + 3)$$

$$12. \quad -8m^6n^5 + 80m^7n^2 + 40m^4n^3 - 40m^6n^4$$
$$8m^4n(-1m^2n^4 + 10m^3n + 5n^2 - 5m^2)$$

$$13. \quad 27xy^3 + 27y^2 - 54x + 18y$$
$$9(3xy^3 + 3y^2 - 6x + 2y)$$

$$14. \quad 100y^6 - 10xy^3 + 80x + 40$$
$$10(10y^6 - 1xy^3 + 8x + 4)$$

15.  $x^2 - 12xy + 27y^2$        $-+- = -12$   
 $x^2 - 3xy - 9xy + 27y^2$        $-x- = 27$   
 $x(x-3y) - 9y(x-3y)$        $\wedge$   
 $(x-3y)(x-9y)$        $\begin{matrix} -1 & -27 \\ \hline -3 & -9 \end{matrix}$

16.  $x^2 - 2xy - 63y^2$        $-+- = -2$   
 $x^2 + 7xy - 9xy - 63y^2$        $-x- = -63$   
 $x(x+7y) - 9y(x+7y)$        $\wedge$   
 $(x+7y)(x-9y)$        $\begin{matrix} 1 & -63 \\ \hline 3 & -21 \\ \hline 7 & -9 \end{matrix}$

17.  $6a^2 + 19a + 10$

$6a^2 + 4a + 15a + 10$

$2a(3a+2) + 5(3a+2)$

$(3a+2)(2a+5)$

$- + - = 19$

$- \times - = 60$

	^
1	60
2	30
3	20
4	15
5	12
6	10



18.  $-9b^2 - 24b + 20$

$-9b^2 + 6b - 30b + 20$

$3b(-3b + 2) + 10(-3b + 2)$

$(-3b + 2)(3b + 10)$

$- + - = -24$

$- \times - = 180$

^

1 -180

2 -90

3 -60

4 -45

5 -36

6 -30

9 -20

10 -18

12 -15

19.  $8m^2 + 14mn + 5n^2$

$8m^2 + 4mn + 10mn + 5n^2$

$4m(2m + 1n) + 5n(2m + 1n)$

$(2m + 1n)(4m + 5n)$

$- + - = 14$

$- x - = 40$

1	40
2	20
4	10
5	8

20.  $6x^2 + 47xy + 90y^2$

$6x^2 + 20xy + 27xy + 90y^2$

$2x(3x + 10y) + 9y(3x + 10y)$

$(3x + 10y)(2x + 9y)$

$- + - = 47$

$- x - = 540$

1	540
2	270
3	180
4	135
5	108
6	90
9	60
10	54
12	45
15	36
18	30
20	27

21.  $25x^2 - 49$

$$(5x-7)(5x+7)$$

22.  $36m^4 - 81n^2$

$$(6m^2-9n)(6m^2+9n)$$

23.  $100d^8 - 9n^{10}$

$$(10d^4+3n^5)(10d^4-3n^5)$$

24.  $\frac{9}{16} - 64x^2$

$$\left(\frac{3}{4} - 8x\right)\left(\frac{3}{4} + 8x\right)$$

25.  $36m^2n^6 - 49$

$$(6mn^3-7)(6mn^3+7)$$

26.  $x^2 - 1$

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