

UNIT 2 HW 1 - Introduction to Polynomials

Name Key Spring 2017

Perform the indicated operation.

1. $(-3x^2 - 6x + 5) + (-2x^2 + 3x - 5)$

$$-5x^2 - 3x$$

3. $(x^3 + 3x^2) - (-x^2 + x)$
 $+x^2 - x$

$$x^3 + 4x^2 - x$$

5. $(-9a^2 + 8a^3 - 11a) - (9a^3 - 12a + a^2)$
 $-9a^3 + 12a - a^2$

$$-a^3 - 10a^2 + a$$

7. $2p^3(4p^3 - 3p^2 + 5)$

$$8p^6 - 6p^5 + 10p^3$$

9. $-6\left(\frac{2}{3}r^3 - \frac{3}{2}\right)$

$$-4r^3 + 9$$

11. $(x - 3)^2(x - 3)$

$$x^2 - 3x - 3x + 9$$

$$x^2 - 6x + 9$$

13. $(4 - m)(8 - m)$

$$32 - 4m - 8m + m^2$$

$$32 - 12m + m^2$$

2. $(2u^2 + 3u - 6) - (-8u + 10)$
 $+8u - 10$

$$2u^2 + 11u - 16$$

4. $(-3c^3 - 2 + 4c) + (5c + 3c^3 - 7)$

$$9c - 9$$

6. $(-7a^2 + 9a - 16) + (a + 20)$

$$-7a^2 + 10a + 4$$

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

$$y^4 + 2y^3 + 3y^2 - 6y$$

10. $\frac{-2}{9}(18x^3 - 12x)$

$$-4x^3 + \frac{8}{3}x$$

12. $(d - 3)(d - 25)$

$$d^2 - 28d + 75$$

$$d^2 - 28d + 75$$

14. $(-y - 11)(y + 2)$

$$-y^2 - 2y - 11y - 22$$

$$-y^2 - 13y - 22$$

15. $(6a + 1)(4a + 1)$

$$24a^2 + 6a + 4a + 1$$

$$24a^2 + 10a + 4$$

16. $(3 - n^2)(15 - n^2)$

$$45 - 3n^2 - 15n^2 + n^4$$

$$45 - 18n^2 + n^4$$

17. $(4a + 2)(6a^2 - a + 2)$

	$6a^2$	$-a$	2
$4a$	$24a^3$	$-4a^2$	$8a$
2	$12a^2$	$-2a$	4

$$24a^3 + 8a^2 + 6a + 4$$

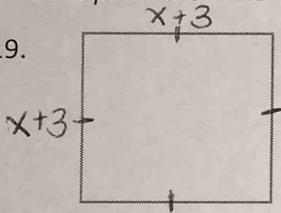
18. $(7k - 3)(k^2 - 2k + 7)$

	k^2	$-2k$	7
$7k$	$7k^3$	$-14k^2$	$49k$
-3	$-3k^2$	$6k$	21

$$7k^3 - 17k^2 + 55k - 21$$

Find the perimeter AND area of each shape:

19.



$$\text{Perimeter} = x+3 + x+3 + x+3 + x+3$$

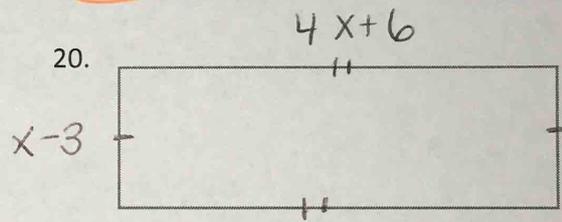
$$P = 4(x+3)$$

$$P = 4x + 12$$

$$\text{Area} = (x+3)(x+3)$$

$$A = x^2 + 6x + 9$$

20.



$$\text{Perimeter} = 4x+6 + x-3 + 4x+6 + x-3$$

$$P = 2(4x+6) + 2(x-3)$$

$$P = 10x + 6$$

$$\text{Area} = (x-3)(4x+6)$$

$$A = 4x^2 + 6x - 12x - 18$$

$$A = 4x^2 - 6x - 18$$