

Name: _____ Block: _____

Algebra 1 - 8.1-3 Retake Review

1 $-6x^3$ is a monomial.

2 Classify the polynomial according to its degree and terms.

$$9w + 5$$

↓ ↓
Linear Binomial

3 Write the polynomial in standard form. Classify by its degree and terms.

$$4g - 3g^3 + 9g^2 - 1$$

$-3g^3 + 9g^2 + 4g - 1$
↓ ↓
Cubic Polynomial

4 Simplify the sum.

$$(3u^3 + 3u^2 + 5) + (8u^3 - 8u + 3)$$

$$11u^3 + 3u^2 - 8u + 8$$

10 Multiply. $-6a(5a^2 + 6a - 7)$

$$-30a^3 - 36a^2 + 42a$$

5 Subtract. $(5w^2 + 8w + 7) + (8w^2 + 2w + 2)$

$$-3w^2 - 10w - 5$$

11 Simplify the product of polynomials.

$$(2x^2 - 3x)(5x^2 - x + 2)$$

$$\begin{array}{r} 10x^4 - 2x^3 + 4x^2 \\ + \quad -15x^3 + 3x^2 - 6x \\ \hline 10x^4 - 17x^3 + 7x^2 - 6x \end{array}$$

Factor the polynomials: (Find the GCF first.)

6 $6w^8 + 4w^4$

$$2w^4(3w^4 + 2)$$

12 Simplify the product $(6h + 2)(3h - 6)$

$$\begin{array}{r} 18h^2 - 36h \\ + \quad 6h - 12 \\ \hline 18h^2 - 30h - 12 \end{array}$$

7 $3x^3 + 6x^2 - 15x$

$$3x(x^2 + 2x - 5)$$

8 $-3x^2 - 9x$

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

9 Factor $32c^3d^4 + 4c^4d^2$

$$4c^3d^2(8d^2 + c)$$

13 Multiply. $(x - 2)(x + 5)$

$$\begin{array}{r} x^2 + 5x \\ + \quad -2x - 10 \\ \hline x^2 + 3x - 10 \end{array}$$