Name **Answer Key**

6-2 Multiplying Monomials

Period____

Multiply. Write your answer in simplest form.

1) $2 \cdot x$ $\boxed{2x}$

2) $y \cdot 4x$ $\boxed{4xy}$

3) $3x \cdot 3x$ $\boxed{9x^2}$

4) $1 \cdot 7y$ $\boxed{7y}$

Find each product.

5) $3(3x + 2)$ $\boxed{9x + 6}$

6) $4(x - 2)$ $\boxed{4x - 8}$

7) $4(3k - 2)$ $\boxed{12k - 8}$

8) $3(4x + 2)$ $\boxed{12x + 6}$

9) $5y^2(2x + y)$ $\boxed{10xy^2 + 5y^3}$

10) $5(5m - 2n)$ $\boxed{25m - 10n}$

11) $2x(5x - 2y)$ $\boxed{10x^2 - 4xy}$

12) $3b(4a + 5b)$ $\boxed{12ab + 15b^2}$

13) $2a(-2a^2 + 4ab - 3b^2)$ $\boxed{-4a^3 + 8a^2b - 6ab^2}$

14) $-3(x^2 + 4xy + 5y^2)$ $\boxed{-3x^2 - 12xy - 15y^2}$

15) $7(-3x^2 + 4xy + y^2)$ $\boxed{-21x^2 + 28xy + 7y^2}$

16) $-2n^2(-3m^2 - 8mn - 4n^2)$ $\boxed{6m^2n^2 + 16mn^3 + 8n^4}$

Name each polynomial by degree and number of terms.

17) $-10n^4$ 4th degree monomial

18) $7b^4 - 5b^2 - 3$ 4th degree trinomial

19) Write an example of a monomial of the fourth degree.

$3x^4$

20) Write an example of a <u>quadratic</u> trinomial.

$x^2 + 2x - 3$

Simplify.

21) $3xx^3$ $3x^4$

22) $2x \cdot 2x$ $4x^2$

Simplify. Your answer should contain only positive exponents with no fractional exponents in the denominator.

23) $2m^{\frac{3}{2}} \cdot 3m^{\frac{2}{3}}$ $\frac{9}{6} + \frac{4}{6}$ $\boxed{6m^{\frac{13}{6}}}$

24) $2r^{\frac{5}{3}} \cdot 2r^{-\frac{5}{3}}$ $4r^0 = \boxed{4}$