

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## MULTIPLY &amp; DIVIDE POLYNOMIALS: Worksheet 2

Multiply the following and combine like terms when possible.

1)  $-6y(y-1)$

2)  $x(5x^3+4)$

3)  $-6(-4w^2-w+3)$

4)  $8t(3t^2+4t+2)$

5)  $(x+7)(x-2)$

6)  $(3y+8)(y-2)$

7)  $(a^2-5)(a-1)$

8)  $(2x+3)(-4x-2)$

9)  $(r+1)(3r^2-2r-5)$

10)  $(9x-4)(2x^2+3x-1)$

11)  $(t-6)(-2t^2-2t+5)$

12)  $(t-1)(-8t^2-5t-3)$

Divide the following.

13)  $\frac{6t+18}{3}$

14)  $\frac{7x^2-21x}{7x}$

15)  $\frac{16y^4+12y^2}{4y}$

16)  $\frac{40w^4-15w^2}{5w^2}$

17)  $\frac{30t^2+10t-5}{5}$

18)  $\frac{4r^5+8r^3+4r^2}{4r}$

19)  $\frac{12x^3-6x+9}{-3}$

20)  $\frac{9t^5-9t^3+12t^2}{3t}$

KEY

MULTIPLY & DIVIDE POLYNOMIALS: Worksheet 2

Multiply the following and combine like terms when possible.

1)  $-6y(y-1)$   
 $-6y^2 + 6$

2)  $x(5x^3 + 4)$   
 $5x^4 + 4x$

3)  $-6(-4w^2 - w + 3)$   
 $24w^2 + 6w - 18$

4)  $8t(3t^2 + 4t + 2)$   
 $24t^3 + 32t^2 + 16t$

5)  $(x+7)(x-2)$   
 $x^2 + 5x - 14$

6)  $(3y+8)(y-2)$   
 $3y^2 + 2y - 16$

7)  $(a^2 - 5)(a - 1)$   
 $a^3 - a^2 - 5a + 5$

8)  $(2x+3)(-4x-2)$   
 $-8x^2 - 16x - 6$

9)  $(r+1)(3r^2 - 2r - 5)$   
 $3r^3 + r^2 - 7r - 5$

10)  $(9x-4)(2x^2 + 3x - 1)$   
 $18x^3 + 19x^2 - 21x + 4$

11)  $(t-6)(-2t^2 - 2t + 5)$   
 $-2t^3 + 10t^2 + 17t - 30$

12)  $(t-1)(-8t^2 - 5t - 3)$   
 $-8t^3 + 3t^2 + 2t + 3$

Divide the following.

13)  $\frac{6t+18}{3} \quad 2t+6$

14)  $\frac{7x^2 - 21x}{7x} \quad x-3$

15)  $\frac{16y^4 + 12y^2}{4y} \quad 4y^3 + 3y$

16)  $\frac{40w^4 - 15w^2}{5w^2} \quad 8w^2 - 3$

17)  $\frac{30t^2 + 10t - 5}{5} \quad 6t^2 + 2t - 1$

18)  $\frac{4r^5 + 8r^3 + 4r^2}{4r} \quad r^4 + 2r^2 + r$

19)  $\frac{12x^3 - 6x + 9}{-3} \quad -4x^3 + 2x - 3$

20)  $\frac{9t^5 - 9t^3 + 12t^2}{3t} \quad 3t^4 - 3t^2 + 4t$