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MULTIPLY & DIVIDE POLYNOMIALS: Worksheet 1

Multiply the following and combine like terms when possible.

1) $4y(y+3)$

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

3) $-2(5w^2-4w+7)$

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

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

6) $(2y+1)(3y-5)$

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

8) $(-7x+2)(x-5)$

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

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

11) $(t-10)(-2t^2-4t+6)$

12) $(x+4)(-3x^2+3x-1)$

Divide the following.

13) $\dfrac{4t+12}{4}$

14) $\dfrac{9x^2-15x}{3x}$

15) $\dfrac{8y^3+2y^2}{2y}$

16) $\dfrac{25w^4-10w^2}{5w^2}$

17) $\dfrac{7t^2+7t-21}{7}$

18) $\dfrac{2r^6+6r^3+4r^2}{2r}$

19) $\dfrac{3x^4-9x-6}{-3}$

20) $\dfrac{12t^4-12t^3+12t}{6t}$

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MULTIPLY & DIVIDE POLYNOMIALS: Worksheet 1

Multiply the following and combine like terms when possible.

1) $4y(y+3)$

$4y^2 + 12y$

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

$3x^3 - 2x$

3) $-2(5w^2 - 4w + 7)$

$-10w^2 + 8w - 14$

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

$12t^3 - 6t^2 + 18t$

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

$x^2 - x - 6$

6) $(2y+1)(3y-5)$

$6y^2 - 7y - 5$

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

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

8) $(-7x+2)(x-5)$

$-7x^2 + 37x - 10$

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

$2r^3 + 3r^2 - 7r + 6$

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

$12x^3 - 14x^2 + 7x - 2$

11) $(t-10)(-2t^2 - 4t + 6)$

$-2t^3 + 16t^2 + 46t - 60$

12) $(x+4)(-3x^2 + 3x - 1)$

$-3x^3 - 9x^2 + 11x - 4$

Divide the following.

13) $\dfrac{4t+12}{4}$ $t+3$

14) $\dfrac{9x^2 - 15x}{3x}$ $3x-5$

15) $\dfrac{8y^3 + 2y^2}{2y}$ $4y^2 + y$

16) $\dfrac{25w^4 - 10w^2}{5w^2}$ $5w^2 - 2$

17) $\dfrac{7t^2 + 7t - 21}{7}$ $t^2 + t - 3$

18) $\dfrac{2r^6 + 6r^3 + 4r^2}{2r}$ $r^5 + 3r^2 + 2r$

19) $\dfrac{3x^4 - 9x - 6}{-3}$ $-x^4 + 3x + 2$

20) $\dfrac{12t^4 - 12t^3 + 12t}{6t}$ $2t^3 - 2t^2 + 2$