

8-29-13
3rd Trig

Simplifying expressions

Only put together things
that are the same.

$$\textcircled{1} \quad 3x^2y + 4xy^2 + 2xy^2 - 8x^2y \\ - 5x^2y + 6xy^2$$

$$\textcircled{2} \quad 2xy + 6 + 4yx + 10 + xy \\ 7xy + 16$$

$$\textcircled{3} \quad (2n)(4n) + 3(5n^2) \\ 8n^2 + 15n^2 \\ 23n^2$$

$$\textcircled{4} \quad (x^6)(2x)^2 + (x^3)^2 \\ \downarrow \qquad \qquad \downarrow \\ x^6 \cdot 2x \cdot 2x + x^3 \cdot x^3 \\ 4x^8 + x^6$$

$$\textcircled{5} \quad (4x^3)^2(2x^4) - (5x^2)^4(2x)^3 \\ \begin{array}{l} 4x^3 \cdot 4x^3 \cdot 2x^4 \\ \text{xxx} \quad \text{xxx} \quad \text{xxxx} \\ 32x^{10} \end{array} \quad - \quad \begin{array}{l} 5x^2 \cdot 5x^2 \cdot 5x^2 \cdot 5x^2 \\ 2x \cdot 2x \cdot 2x \\ 5000x^{11} \end{array} \\ 32x^{10} - 5000x^{11}$$

$$\textcircled{6} \quad (x+3)(x+2) \\ (\text{Mr. Hickson} + \text{Mrs. Hickson}) \quad \text{Mr. Smith} \\ \text{Mrs. Smith}$$

$$x^2 + 2x + 3x + 6 \\ x^2 + 5x + 6$$

$$\textcircled{7} (x+2)(x^2+3x+10)$$

$$x^3 + 3x^2 + 10x + 2x^2 + 6x + 20$$

$$x^3 + 5x^2 + 16x + 20$$

	x^2	$3x$	10
x	x^3	$3x^2$	$10x$
2	$2x^2$	$6x$	20

$$x^3 + 5x^2 + 16x + 20$$

$$\textcircled{8} (x+1)(x+2)(x+3)$$

$$x^2 + 2x + 1x + 2$$

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

$$x^3 + 3x^2 + 3x^2 + 9x + 2x + 6$$

$$x^3 + 6x^2 + 11x + 6$$

$$\textcircled{9} 3x^2y + 5xy^2 + 6x^2y$$

$$9x^2y + 5xy^2$$

8-29-13

4th Tr: y

- (24) If $x = \frac{2}{3}(x+y)$, which of the following is an expression for x in terms of y ?

$$x = \frac{2}{3}(x+y)$$

$$x = \frac{2}{3}x + \frac{2}{3}y$$

$$-\frac{2}{3}x - \frac{2}{3}x$$

$$\frac{1}{3}x = \frac{2}{3}y$$

$$x = 2y$$

Simplifying Expressions

① $2xy^2 + 3x^2y + xy^2 - 6x^2y$

$$3xy^2 - 3x^2y$$

② $2xy + 6x + y + 4yx - x + y$

$$6xy + 5x + 2y$$

③ $(2n)(5n) + n \cdot 5n^2$

$$10n^2 + 5n^3$$

④ $(2n^2)^2(5n) + 3(10n^5)$

$$2n^2 \cdot 2n^2 \cdot 5n + 3 \cdot 10n^5$$

$$2nn \cdot 2nn \cdot 5n + 3 \cdot 10nnnnn$$

$$20n^5 + 30n^5$$

$$50n^5$$

$$\textcircled{5} \quad (4x^3)^2(2x^4) - (5x^2)^4(2x)^3$$

$$4x^3 \cdot 4x^3 \cdot 2x^4 - 5x^2 \cdot 5x^2 \cdot 5x^2 \cdot 5x^2 \cdot 2x \cdot 2x \cdot 2x$$

$$32x^{10} - 5000x^{11}$$

$$\textcircled{6} \quad (x+3)(x-10)$$

$$x^2 - 10x + 3x - 30$$

$$x^2 - 7x - 30$$

$$\textcircled{7} \quad (x+4)(x^2+2x+10)$$

$$x^3 + 2x^2 + 10x + 4x^2 + 8x + 40$$

$$x^3 + 6x^2 + 18x + 40$$

	x^2	$2x$	10
x	x^3	$2x^2$	$10x$
4	$4x^2$	$8x$	40

$$\textcircled{8} \quad (x+2)(x+2)(x+1)$$

$$(x^2 + 4x + 4)(x+1)$$

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

$$x^3 + 5x^2 + 8x + 4$$