

Perform the indicated operation.

23) Subtract $(14z^2 + 6z - 14)$ from $(5z^2 - z + 6)$.

24) $(-1 + x^2 - 3x) + (-6x - 2 + x^3) + (-5x + 11 - 5x^3)$

25) $(7n^6 - 17n^5 - 11) - (18n^5 + 3n^6 + 9) + (n^7 - 13)$

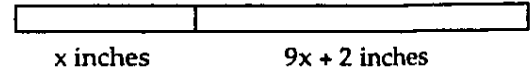
26) $(9x^5 + 5x^7 - 5) + (-7x^6 - 6) - (2x^6 + 3x^7 - 5x^5)$

27) $(-4x^3 + x - 2) + (8x^3 + 2x^2) - (6x^2 - 7x - 1)$

28) $[(5x^2 + 2x + 7) - (4x^2 + 2x - 3)]$
 $- [(5x^2 + 2x - 6) + (-2x^2 + 4x - 7)]$

Provide an appropriate response.

- 29) Alice is making a quilt. She needs a strip of cloth that is x inches long and another that is $9x + 2$ inches long. What is the total length of the two pieces of cloth needed?



- 30) If Ikuko has $4x - 6$ yen and Randal has x yen, how much money do they have combined?

- 31) A plumber is fixing a leaking pipe and has a new pipe that is $8z + 5$ centimeters long. He has to cut off a piece $z - 7$ centimeters long. How long is the remaining piece of pipe?

- 32) If Shanika runs 6y kilometers and then runs $5y - 1$ kilometers more, how far has she run all together?

- 1) Like; $-11m^6$
- 2) Unlike
- 3) Like; $8x^6$
- 4) $7a^5 + 7a^3$
- 5) $6x^7 - 10x^6 + 8x^5 + 4$
- 6) $\frac{3}{2}x^2 - \frac{9}{8}x + \frac{9}{10}$
- 7) $19a + 1.4$
- 8) $\frac{3}{5}x + \frac{5}{7}y$
- 9) $19.4x^4 + 5x^3 + 0$
- 10) $4x^2 + 7x - 1$
- 11) $10x^8 + 7x^7 - 8x^6 + 11$
- 12) $4x$
- 13) $6x - 6$
- 14) $-3a - 6b + 3c$
- 15) $3a^5 + 18a^3$
- 16) $4x^9 - 14x^8 - 11x^7 + 3$
- 17) $4x^4 + 9x^3 - x^2 + 7x + 2$
- 18) $-5.4y + 22$
- 19) $14a^2 + 5a + 8$
- 20) $b^3 + 11b^2 + 15$
- 21) $2x^4 + 12x^3 + 12x^2 - 5$
- 22) $-\frac{2}{13}y^2 + \frac{5}{29}y + \frac{15}{37}$
- 23) $-9z^2 - 7z + 20$
- 24) $-4x^3 + x^2 - 14x + 8$
- 25) $n^7 + 4n^6 - 35n^5 - 33$
- 26) $2x^7 - 9x^6 + 14x^5 - 11$
- 27) $4x^3 - 4x^2 + 6x + 3$
- 28) $-2x^2 - 6x + 23$
- 29) $10x + 2$ inches
- 30) $5x - 6$ yen
- 31) $7z + 12$ cm
- 32) $11y - 1$ km

PreAlgebra Topic 43 - Adding & Subtracting Polynomials

Identify the terms as like or unlike. If like, find the sum.

~~1) $-8m^6; -3m^6$~~

~~2) $-9y^8; -8y^7$~~

~~3) $7x^6; 4x^6; -3x^6$~~

Add the polynomials.

4)
$$\begin{array}{r} 2a^5 + 5a^3 \\ 5a^5 + 2a^3 \\ \hline \end{array}$$

5)
$$\begin{array}{r} 3x^7 - 2x^6 + 3x^5 - 1 \\ 3x^7 - 8x^6 + 5x^5 + 5 \\ \hline \end{array}$$

~~6)
$$\begin{array}{r} \frac{2}{3}x^2 - \frac{3}{8}x + \frac{3}{5} \\ \frac{5}{6}x^2 - \frac{3}{4}x + \frac{3}{10} \\ \hline \end{array}$$~~

~~7) $(12a - 8,2) + (7a + 1,6)$~~

8)
$$\left(\frac{1}{5}x + \frac{4}{7}y\right) + \left(\frac{2}{5}x + \frac{1}{7}y\right)$$

~~9) $(9,8x^4 + 7) + (9,6x^4 + 5x^3 + 7)$~~

10) $(-4x^2 + 12x) + (8x^2 - 5x - 1)$

11) $(9 - 6x^6 + 2x^8 - 2x^7) + (9x^7 - 2x^6 + 2 + 8x^8)$

Find the opposite of the polynomial.

12) $-4x$

13) $(-6x + 6)$

14) $(3a + 6b - 3c)$

Subtract the polynomials.

15)
$$\begin{array}{r} 17a^5 + 10a^3 \\ - (14a^5 - 8a^3) \\ \hline \end{array}$$

16)
$$\begin{array}{r} 7x^9 - 6x^8 - 3x^7 + 9 \\ - (3x^9 + 8x^8 + 8x^7 + 6) \\ \hline \end{array}$$

17)
$$\begin{array}{r} 5x^4 + 7x^3 + 2 \\ - (x^4 - 2x^3 + x^2 - 7x) \\ \hline \end{array}$$

~~18) $(4,3x + 9) - (9,7x - 13)$~~

19) $(9a^2 + 5a + 5) - (-5a^2 - 3)$

20) $(3b^2 + 10) - (-b^3 - 8b^2 - 5)$

21) $(9x^4 + 7x^3 + 4x^2 - 7) - (7x^4 - 5x^3 - 8x^2 - 2)$

~~22)
$$\left(\frac{9}{13}y^2 + \frac{1}{29}y - \frac{3}{37}\right) - \left(\frac{11}{13}y^2 - \frac{4}{29}y - \frac{18}{37}\right)$$~~