



# Simplifying Polynomial Expressions

Name:

Date:



**Simplify each polynomial.**

$$1) 3x^2 - 5x^3 - x(4x^3 + x) =$$

$$2) 17k + 8k^3 - 8 - 2(k^4 - 3) =$$

$$3) 17x^3 - 7x^4 - 18x^3 + 10x^4 =$$

$$4) 10 + 2y^3 - (8y^3 - y^2 + 5) =$$

$$5) (5z^3 + 8z - 8z^2) - (8z^3 - 8z^2 + 10z) = \quad 6) 7 - 7x^3 + 6x - 10x^2 + 15x^3 =$$

$$7) 8m^4 + m - 2 - 10 - 5m^2 + 3m^4 =$$

$$8) 5x^2 + 5 - 2x^2 + 3x^3 - 10 =$$

$$9) (6x^3 - 4) + 3(x^2 - 4x^3) =$$

$$10) (5x^2 - 2x^3) - 2(x^2 + x^3) =$$

$$11) 2x^2 - 4x^4 + 10x^4 - 11x^3 =$$

$$12) 5x^3 - (4x^4 + 2x) - 4x^3 =$$

$$13) 17x - 3x^2 - 2(x - 2x^2) =$$

$$14) 5x^4 - 25 + 5(6x^4 + 5) =$$



QUIZ ?

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## Simplifying Polynomial Expressions

### Answers



**Simplify each polynomial.**

1)  $3x^2 - 5x^3 - x(4x^3 + x) =$   
 $-4x^4 - 5x^3 + 2x^2$

2)  $17k + 8k^3 - 8 - 2(k^4 - 3) =$   
 $8k^3 + 17k - 2$

3)  $17x^3 - 7x^4 - 18x^3 + 10x^4 =$   
 $3x^4 - x^3$

4)  $10 + 2y^3 - (8y^3 - y^2 + 5) =$   
 $-6y^3 + y^2 + 5$

5)  $(5z^3 + 8z - 8z^2) - (8z^3 - 8z^2 + 10z) =$   
 $-3z^3 - 2z$

6)  $7 - 7x^3 + 6x - 10x^2 + 15x^3 =$   
 $8x^3 - 10x^2 + 6x + 7$

7)  $8m^4 + m - 2 - 10 - 5m^2 + 3m^4 =$   
 $11m^4 - 5m^2 - 12$

8)  $5x^2 + 5 - 2x^2 + 3x^3 - 10 =$   
 $3x^3 + 3x^2 - 5$

9)  $(6x^3 - 4) + 3(x^2 - 4x^3) =$   
 $-6x^3 + 3x^2 - 4$

10)  $(5x^2 - 2x^3) - 2(x^2 + x^3) =$   
 $-4x^3 + 3x^2$

11)  $2x^2 - 4x^4 + 10x^4 - 11x^3 =$   
 $6x^4 - 11x^3 + 2x^2$

12)  $5x^3 - (4x^4 + 2x) - 4x^3 =$   
 $-4x^4 + x^3 - 2x$

13)  $17x - 3x^2 - 2(x - 2x^2) =$   
 $x^2 + 15x$

14)  $5x^4 - 25 + 5(6x^4 + 5) =$   
 $35x^4$



QUIZ ?

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