

Simplifying Polynomials

Name \_\_\_\_\_

Simplify fully. Show a full solution with steps and simplifying.

1.  $2(x+5)(x-2)$

2.  $-5(x-2)(x-1)$

3.  $(x+7)^2$

4.  $(x-8)^2$

5.  $(2x+5)^2$

6.  $4(3x-1)^2$

7.  $-3(5x-2)^2$

8.  $(x-1)^2 + (x+1)^2$

9.  $(x+4)^2 + (x-1)^2$

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

11.  $4x^2 + 2(x+3)(x-1)$

12.  $2(x+3)(x-1) - 3(x+2)$

13.  $3(x+2)(x-4) + 2(x-3)^2$

14.  $-5(x-10)^2 + 5(x+5)(x-5)$

15.  $(2x-3y)(x+2y) - 2(x+y)(x-2y)$

16.  $4x^2 - 3x + 1 - 2(x+2)^2$

17.  $(x+1)^2 + (x+2)^2 + (x+3)^2$

18.  $(x-1)^2 + (x-2)^2 + (x-3)^2$

Extend your knowledge

19.  $(x+2)(x^2 - 2x - 4)$

20.  $(x+2)(x-3)(x+1)$

Simplify fully. Show a full solution on lined paper.

1.  $(x+2)(x+7)$

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

3.  $(x+3)(x-8)$

4.  $2(x+5)(x-2)$

5.  $-5(x-2)(x-1)$

6.  $(x+7)^2$

7.  $(x-8)^2$

8.  $(2x+5)^2$

9.  $4(3x-1)^2$

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15.  $3(x+2)(x-4) + 2(x-3)^2$

16.  $-5(x-10)^2 + 5(x+5)(x-5)$

17.  $(2x-3y)(x+2y) - 2(x+y)(x-2y)$

18.  $4x^2 - 3x + 1 - 2(x+2)^2$

19.  $(x+2)^2 - (x+2)^2$

20.  $(x+1)^2 - (x-2)^2$

Online lesson: <http://www.purplemath.com/modules/polymult.htm>

Check your answers here. [www.webmath.com/anything.html](http://www.webmath.com/anything.html)

Websites for previous work: [www.purplemath.com/modules](http://www.purplemath.com/modules)