

### 5.4 Special Products CYU

Use when you get it right all by yourself

**S** Use when you did it all by yourself, but made a silly mistake

**H** Use when you could do it alone with a little help from teacher or peer

**G** Use when you completed the problem in a group

**X** Use when a question was attempted but wrong (get help)

**N** Use when a question was not even attempted

| CONCEPTS   | BASIC                  | INTERMEDIATE          | ADVANCED    |
|--|------------------------|-----------------------|-------------|
| FOILing Method                                     | 1 - 4, 7 - 10, 16 - 18 | 5, 6, 11 - 14, 24, 25 | 15, 19 - 23 |
| Standard form of a polynomial expression           | 1 - 4, 7 - 10, 16 - 18 | 5, 6, 11 - 14, 24, 25 | 15, 19 - 23 |
| Determining the degree of a polynomial expressions | 1 - 4, 7 - 10, 16 - 18 | 5, 6, 11 - 14, 24, 25 | 15, 19 - 23 |

Use the FOILing Method to multiply. Write your answer in standard form. State the degree. Show all work to earn full credit.

1.  $(x-3)(x+4)$       2.  $(x+2)(x-5)$       3.  $(5x-7)(x-2)$       4.  $(4x-9)(x-1)$

$x^2 + x - 12$        $x^2 - 3x - 10$        $5x^2 - 17x + 14$        $4x^2 - 13x + 9$

5.  $2(y+6)(2y-1)$       6.  $3(x+5)(3x-1)$       7.  $(3y+1)^2$       8.  $(4x-1)^2$

$4y^2 + 22y - 12$        $9x^2 + 42x - 15$        $9y^2 + 6y + 1$        $16x^2 - 8x + 1$

9.  $(g+2)^2$       10.  $(p-q)^2$       11.  $(2x+5)^2$       12.  $(x^2-7y)^2$

$g^2 + 4g + 4$        $p^2 - 2pq + q^2$        $4x^2 + 20x + 25$        $x^4 - 14x^2y + 49y^2$

13.  $4(x+4)(x-4)$       14.  $(6h+7)(6h-7)$       15.  $(x-\frac{1}{4})(x+\frac{1}{4})$       16.  $(2q-p)(2q+p)$

$4x^2 - 64$        $36h^2 - 49$        $x^2 - \frac{1}{16}$        $4q^2 - p^2$

17.  $(x-5)(3x+4)$

$3x^2 - 11x - 20$

18.  $(7x+4)^2$

$49x^2 + 56x + 16$

19.  $(y-0.6)(y+0.6)$

$y^2 - 0.36$

20.  $(y^4 + \frac{2}{5})(3y^2 - \frac{1}{5})$

$3y^6 - \frac{1}{5}y^4 + \frac{6}{5}y^2 - \frac{2}{25}$

21.  $(a-3)(a^2+2a-1)$

$a^3 - a^2 - 7a + 3$

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

$x^3 + 6x^2 + 3x - 2$

23.  $(x^2 - \frac{3}{7})(3x^4 + \frac{2}{7})$

$3x^6 - \frac{9}{7}x^4 + \frac{2}{7}x^2 - \frac{6}{49}$

24.  $(b+3)^2$

$b^2 + 6b + 9$

25.  $(a^2 - 5b)^2$

$a^4 - 10a^2b + 25b^2$

**CYU Reflection:** How far can you go: basic, intermediate, or advanced?

**Rate your mastery level!**

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

