


# SECRET SHAPE

How well do you know your shapes? See if you can identify the secret shape from the clue words you decode.

Add the following polynomials. Write the exercise number in front of the corresponding answer listed in the grid. To spell out the words at the bottom of the page, refer to the grid and write the code letter that corresponds to the exercise number given.

 **Tip:** When combining two polynomials, add the coefficients of like terms. For example,  $(2x^2 + 3x + 7) + (5x^2 + x + 6) \rightarrow (2 + 5)x^2 + (3 + 1)x + (7 + 6) \rightarrow 7x^2 + 4x + 13$ .

1.  $(x^2 + 2x + 4) + (3x^2 + 2x + 5)$
2.  $(3x^2 - 2x + 7) + (5x^2 + 8x - 5)$
3.  $(x^2 - 7x + 4) + (9x^2 + 6x + 4)$
4.  $(2x^2 + 7) + (-7x^2 - 8)$
5.  $(-6x^2 + 5x - 3) + (x^2 - 2x + 7)$
6.  $(-3x^2 + 4) + (-9x^2 - 5x + 3)$
7.  $(5x^2 - 10x + 3) + (4x^2 - 1)$
8.  $(x^2 + 2x - 1) + (x^3 - 2x + 1)$
9.  $(3x^3 - 4x^2) + (7x^2 + 6)$
10.  $(-12x^2 - x + 8) + (9x^2 - 16)$
11.  $(-x^2 - x - 1) + (-x^2 - 3x + 7)$
12.  $(13x^3 - 6x - 15) + (-9x^2 + 15)$
13.  $(-4x^2 - 3x - 9) + (8x^2 + 5x + 10)$
14.  $(-10x^2 + 14) + (x^3 + 9x^2)$
15.  $(-8x^2 + 2x - 6) + (x + 4)$
16.  $(2x^3 - 2x^2 - 10) + (3x^3 + 5)$

**Answer:**

Code Letter	Exercise #	Answer
A		$8x^2 + 6x + 2$
C		$3x^3 + 3x^2 + 6$
D		$x^3 - x^2 + 14$
E		$-5x^2 + 3x + 4$
F		$x^3 + x^2$
G		$13x^3 - 9x^2 - 6x$
H		$4x^2 + 4x + 9$
I		$5x^3 - 2x^2 - 5$
M		$-3x^2 - x - 8$
N		$10x^2 - x + 8$
O		$9x^2 - 10x + 2$
P		$-5x^2 - 1$
R		$4x^2 + 2x + 1$
S		$-8x^2 + 3x - 2$
T		$-2x^2 - 4x + 6$
U		$-12x^2 - 5x + 7$

9 1 7 13 14

15 5 9 11 7 13 13 2 14 16 6 15

9 16 13 9 6 10 8 5 13 5 3 9 5

The words describe which shape? \_\_\_\_\_