Happy Pi Day! 3/14 Name Key

Simplify each expression.

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

$14r^3 + 8r^2 + r$

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

$5x^3 - 4x^2 - 7$

3) $(8n + 5n^2 - 4) - (5 - n - 3n^2)$

$8n^2 + 9n - 9$

4) $(2b^2 - 5b^3 - 6b) - (6b^3 + 5b^2 - b)$

$-11b^3 - 3b^2 - 5b$

5) $(8n^3 - 1 - 4n) + (7n + n^3 + 1)$

$9n^3 + 3n$

6) $(6x^2 + 4x^3 + 7x) + (6x^3 + 7x^2 + 6x)$

$10x^3 + 13x^2 + 13x$

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

$5x^3 + 13x + 6$

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

$9x^2 - 4x + 2$

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

$-4x^2 - 4x - 2$

10) $(3v^3 - 6v - 7v^2) - (4v + 6v^2 + 8v^3)$

$-5v^3 - 13v^2 - 10v$

11) $(5x^2 - 4x^3 - 5x) - (4x^2 - x - 7)$

$-4x^3 + x^2 - 4x + 7$

12) $(x^3 - 3 - 2x^2) + (7x^2 - 4 + 4x^3)$

$5x^3 + 5x^2 - 7$

13) $(5 - 4m + 2m^2) - (3m^2 - 6 + 6m) + (6m^2 - 6)$

$5m^2 - 10m - 5$

14) $(3n + 8 - n^2) + (8n + 5 + n^2) + (8n^2 - 2n)$

$8n^2 + 9n + 13$

15) $(4x^2 + 6x + 3) - (5x - 7 - 4x^2) - (3 - 4x^2)$

$12x^2 + x + 7$

16) $(7 + 7r - r^2) + (2 - 4r^2 + 5r) - (2 - 3r^2)$

$-2r^2 + 12r + 7$

17) $(3n - 6n^2 + 5) - (4n - 6n^2 - 5) - (4n^2 + 5)$

$-4n^2 - n + 5$

18) $(3x + 1 + 5x^2) + (7 + 3x^2 - 5x) + (4x - 8)$

$8x^2 + 2x$

19) $(4n^2 + 2n - 3) - (7 + 7n^2 + 7n) - (2 - 2n)$

$-3n^2 - 3n - 12$

20) $(2 - 3r - 7r^2) - (2r^2 + 7r + 1) - (5 - 6r^2)$

$-3r^2 - 10r - 4$

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

$8r^2 - 19r + 22$

22) $(3r^2 + 5 + 7r) - (8r + 4r^2 + 5) + (8r - 3)$

$-r^2 + 7r - 3$

23) $(m^2 - m^3 + 2m) + (8m^2 + 4m^3 + 5m - 1)$

$3m^3 + 9m^2 + 7m - 1$

24) $(5a^3 + a + 5a^2) - (3 + 4a^2 + 8a - 5a^3)$

$10a^3 + a^2 - 7a - 3$

25) $(2n^3 + 7n^2 - n) - (8n + 6n^3 - 2n^2 + 5)$

$-4n^3 + 9n^2 - 9n - 5$

26) $(7 + 3x - 7x^3) + (x^2 + 3x^3 + 8x - 1)$

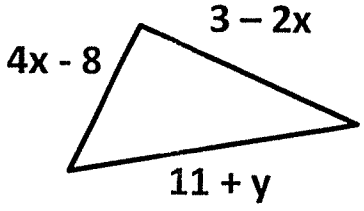
$-4x^3 + x^2 + 11x + 6$

27) $(8n^3 + 5 - 2n) + (7n^3 + 4n + 5 + 8n^2)$

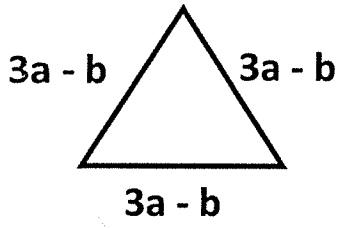
$15n^3 + 8n^2 + 2n + 10$

Find the PERIMETER of the shape.

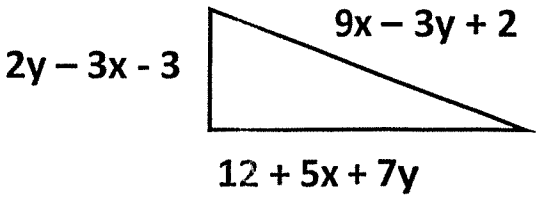
Equation: Perimeter = Sum of all the sides



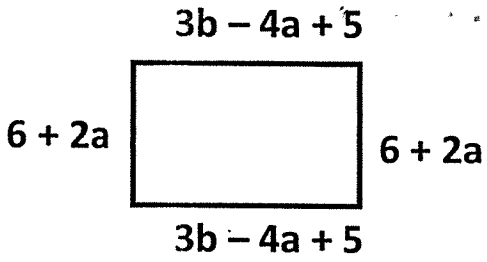
$2x+y+6$



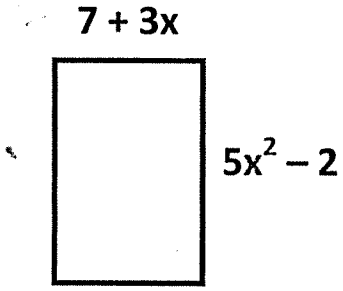
$9a-3b$



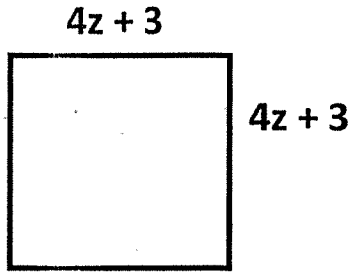
$11x+6y+11$



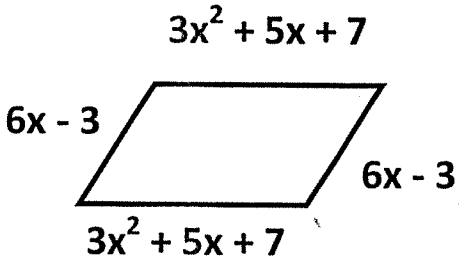
$-4a+6b+22$



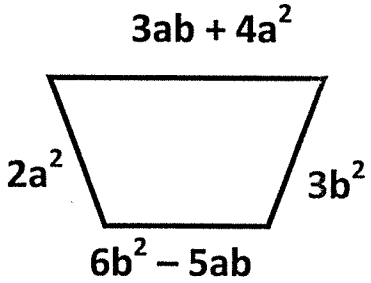
$10x^2+6x+10$



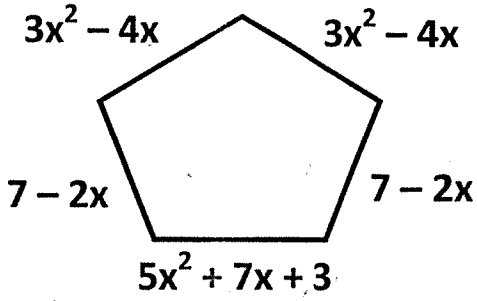
$16z+12$



$6x^2+22x+8$



$6a^2+9b^2-2ab$



$11x^2-5x+17$