

# Christmas Tree Puzzle



# ACCESS MATHS

Simplify each of the expressions. Substitute the correct x values into each expression and find the sum of them all to discover the total.

$$x + x$$

$$(x+5)^2$$

$$3(5x - 10)$$

$$x^2 + x^2 + x^2$$

$$(x + 4)(2x + 3)$$

$$3(5 + 2x) + 3x + 5$$

$$3(5 + 2x) + 2(3x + 5)$$

$$3(3x + 5) + 2(3x - 5) + 4x + 2$$



Answers. The corresponding value of x is in the bracket. E.g. for (1)  $x=1$

a. (1)  $x$       (2)  $2x$       (3)  $x^2$       (4)  $x + 2$

b. (1)  $x^2 + 25$       (2)  $x^2 + 5x + 10$       (3)  $x^2 + 10x + 25$       (4)  $x^2 + 5x + 25$

c. (1)  $15x - 13$       (2)  $8x - 13$       (3)  $15x - 30$       (4)  $8x - 30$

d. (1)  $x^6$       (2)  $3x^6$       (3)  $3 + x^2$       (4)  $3x^2$

e. (1)  $2x^2 + 11x + 12$       (2)  $2x^2 + 7x + 12$       (3)  $2x^2 + 10x + 12$

f. (1)  $18x + 12$       (2)  $9x + 20$       (3)  $9 + 21x$       (4)  $9x + 11$

g. (1)  $25 + 5x$       (2)  $12x + 10$       (3)  $6x + 10$       (4)  $12x + 25$

h. (1)  $19x + 5$       (2)  $19x + 7$       (3)  $19x + 12$       (4)  $6x + 12$

Total:



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4	124	15	48	25	38	34	45
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Total:

333

