



Expand and simplify

$$(2x + 3)^3$$

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

$$(4x^2 + 12x + 9)(2x + 3)$$

$$8x^3 + 12x^2 + 24x^2 + 36x + 18x + 27$$

$$8x^3 + 36x^2 + 54x + 27$$

Make m the subject of the formula

$$E = mgh + \frac{1}{4}mv^2 \quad \times 4$$

$$4E = 4mgh + mv^2$$

$$4E = m(4gh + v^2)$$

$$m = \frac{4E}{4gh + v^2}$$

Calculate the sum of the first 50 odd numbers

$$1 + 99 = 100$$

$$3 + 97 = 100$$

$$5 + 95 = 100$$

and so on

25 pairs

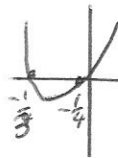
$$25 \times 100 = 2500$$

Solve the inequality

$$12x^2 + 7x + 1 \leq 0$$

$$(4x + 1)(3x + 1)$$

$$x = -\frac{1}{4} \quad x = -\frac{1}{3}$$



$$-\frac{1}{3} \leq x \leq -\frac{1}{4}$$

How many regular polygons have integer interior angles?

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3, 4, 5, 6, 8, 9, 10,
12, 15, 18, 20, 24, 30, 36,
40, 45, 60, 72, 90, 120, 180,
360

interior angle is an integer if
exterior angle is an integer.

$\frac{360}{n}$ is integer if n is a
factor of 360