



Simplify

$$\frac{x^2 - 4x}{4x^3} \quad \frac{x(x-4)}{4x^3}$$

$$\frac{x-4}{4x^2}$$

Work out

$$64^{\frac{3}{2}}$$

$$\sqrt{64} = 8$$

$$8^3 = 512$$

Work out

$$\left(2\frac{1}{4}\right)^{\frac{1}{2}}$$

$$\left(\frac{9}{4}\right)^{\frac{1}{2}}$$

$$\frac{3}{2}$$

The sum of the interior angles in a polygon is  $7380^\circ$ .

Calculate the number of sides the polygon has.

$$(n-2) \times 180 = 7380$$

$$n-2 = 41$$

$$n = 43$$

Expand and simplify

$$(2x+1)(x+3)(x+1)$$

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

$$2x^3 + 8x^2 + 6x + x^2 + 4x + 3$$

$$2x^3 + 9x^2 + 10x + 3$$

In a box, the ratio of green beads to purple beads is 3:5

15 green beads are removed from the box and replaced with 15 purple beads.

The ratio of green beads to purple beads is now 1:2

How many beads are in the box?

$$2(3x-15) = 5x+15$$

$$6x-30 = 5x+15$$

$$x = 45$$

$$8 \times 45 = 360$$