15th July **Higher 5-a-day** Corbettmaths

Simplify $\sqrt{180}$

$\sqrt{36} \times \sqrt{5}$

$6\sqrt{5}$

Simplify $\sqrt{180} + \sqrt{20}$

$6\sqrt{5} + \sqrt{4} \times \sqrt{5}$

$6\sqrt{5} + 2\sqrt{5}$

$8\sqrt{5}$

Expand and simplify

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

$14x^3 - 21x^2 + 2x - 3 - 3x^3 + 12x$

$11x^3 - 21x^2 + 14x - 3$

$w = 2^4 \times 3 \times 5^3$ $14 = 2 \times 7$

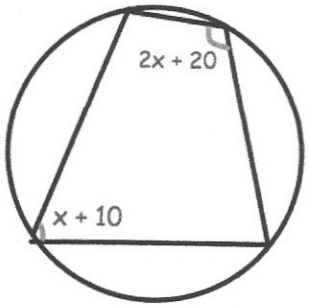
Find the smallest number by which $14w$ would need to be multiplied by to give a cube number.

$14w = 2^5 \times 3 \times 5^3 \times 7$

Next cube: $2^6 \times 3^3 \times 5^3 \times 7^3$

$2 \times 3 \times 3 \times 7 \times 7$

$= 882$

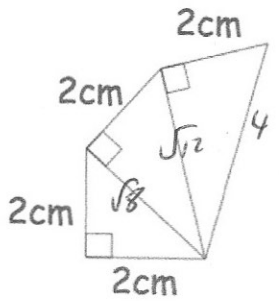


$3x + 30 = 180$

$3x = 150$

$x = 50°$

Find x.



$z^2 + z^2 = 8$

$(\sqrt{8})^2 + z^2 = 12$

$(\sqrt{12})^2 + z^2 = 16$

A logo is formed from 3 smaller triangles.

What is the perimeter of the logo?

$z + z + z + z + 4$

12cm