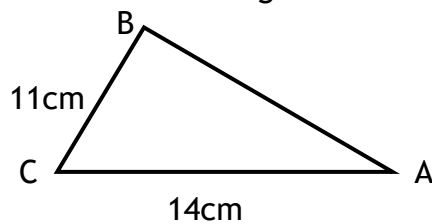


22. Express in its simplest form

$$\frac{3x^5 \times 8x^6}{12^4}$$

23. The volume of a sphere is  $3250 \text{ cm}^3$ .  
Calculate its radius, correct to 3 significant figures.

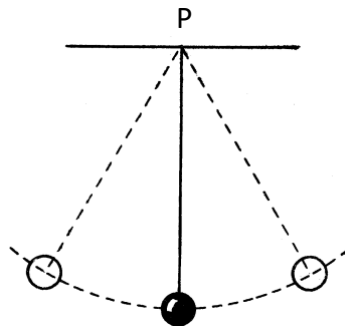
24. The triangle below has an area of  $71 \text{ cm}^2$ .  
Calculate the size of the acute angle BCA.



25. Change the subject of the formula below to  $Q$ .

$$7P = \frac{3Q^2 + 1}{2}$$

26. A pendulum swings from a point P. Its radius is 16cm.  
If it swings through an angle of  $38^\circ$ , calculate the length of the arc before the pendulum returns to its original position.



27. Fully factorise  $2x^2 - 32$  and then simplify  $\frac{2x^2 - 5x - 12}{2x^2 - 32}$

28. Express  $\frac{3}{\sqrt{12}}$  as a fraction with a rational denominator in its simplest form.