

Solve for r

$$\frac{v}{\pi} = \frac{h}{3r}$$

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$$v \cdot 3r = \pi \cdot h$$

$$\cancel{3v}r = \frac{\pi h}{\cancel{3v}}$$

$$r = \frac{\pi h}{3v}$$

Solve for w

$$c = \frac{5n^3}{\sqrt{w+4}}$$

Solve for w

$$(\sqrt{w+4})c = \frac{5n^3 \cdot \cancel{\sqrt{w+4}}}{\cancel{\sqrt{w+4}}}$$

$$\frac{\cancel{c}\sqrt{w+4}}{\cancel{c}} = \frac{5n^3}{c}$$

$$(\sqrt{w+4})^2 = \left(\frac{5n^3}{c}\right)^2$$

$$w+4 = \frac{25n^6}{c^2} - 4$$

$$w = \frac{25n^6}{c^2} - 4$$