

WARM - UP

A cylindrical water tank has radius, r , in feet, that is related to the height, h , in feet, and volume, V , in cubic feet, by the following formula. Given that the radius is 5 feet and the height is 10 feet, find the volume of water that the tank can hold. Round your answer to the nearest hundredth. (that's two decimal places...)

$$r = \sqrt{\frac{V}{\pi h}}$$

$$(5)^2 = \left(\sqrt{\frac{V}{10\pi}} \right)^2$$

$$10\pi \cdot 25 = \frac{V}{10\pi} \cdot 10\pi$$

$$785.4 \text{ ft}^3 = V$$

Jan 24-7:54 AM

Questions on wksht. "B.4 - Day 3" ???

$$3.) \quad r = 1 + \sqrt{3r + 37}$$

$$(r-1)^2 = (\sqrt{3r+37})^2$$

$$r^2 - 2r + 1 = 3r + 37$$

$$r^2 - 5r - 36 = 0$$

$$(r-9)(r+4) = 0$$

$$r = 9, \quad r = -4$$

Jan 24-8:03 AM

B.4 Solving Square Root and other Radical Equations~**Day 4***Solving an equation with two radicals (Level 4s)*What is the solution of $(\sqrt{x+12})^2 = (\sqrt{x+2})^2$

$$\begin{array}{r} x+12 = x + 4\sqrt{x} + 4 \\ \underline{-x} \quad \underline{-4} \quad \underline{-x} \quad \underline{-4} \end{array}$$

$$\frac{8}{4} = \frac{4\sqrt{x}}{4}$$

$$(2)^2 = (\sqrt{x})^2$$

$$\boxed{4 = x}$$

Jan 20-11:44 AM

What is the solution of $\sqrt{5x+4} - \sqrt{x} = 4$

$$(\sqrt{5x+4})^2 = (\sqrt{x} + 4)^2$$

$$\begin{array}{r} 5x+4 = x + 8\sqrt{x} + 16 \\ \underline{-x} \quad \underline{-16} \quad \underline{-x} \quad \underline{-16} \end{array}$$

$$\frac{4x-12}{4} = \frac{8\sqrt{x}}{4}$$

$$(x-3)^2 = (2\sqrt{x})^2$$

$$\begin{array}{r} x^2 - 6x + 9 = 4x \\ \underline{-4x} \quad \underline{-4x} \end{array}$$

$$x^2 - 10x + 9 = 0$$

$$(x-9)(x-1) = 0$$

$$\boxed{x=9} \quad \boxed{\cancel{x=1}}$$

Jan 20-11:46 AM