

(*2*)

Solve[Reduce[Sqrt[3^n + n] == Sqrt[2], n]]

... **Solve:** Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information.

$$\left\{ \left\{ n \rightarrow \frac{2 \log(3) - W(9 \log(3))}{\log(3)} \right\} \right\}$$

(*3*)

Solve[Sqrt[3^n + n] == 1.5, n]

... **Solve:** Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information.

$$\frac{9 \operatorname{Log}[3] - 4 \operatorname{ProductLog}\left[9 \times 3^{1/4} \operatorname{Log}[3]\right]}{4 \operatorname{Log}[3]}$$

(*4*)

Solve[Sqrt[3^n + n] == 2 * Sqrt[2/3], n]

... **Solve:** Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information.

$$\left\{ \left\{ n \rightarrow \frac{8 \log(3) - 3 W(9 \times 3^{2/3} \log(3))}{3 \log(3)} \right\} \right\}$$

... **Solve:** Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information.

(*5*)

Solve[Sqrt[3^n + n] == 5 / (2 * Sqrt[2]), n]

... **Solve:** Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information.

$$\left\{ \left\{ n \rightarrow \frac{25 \log(3) - 8 W\left(27 \sqrt{3} \log(3)\right)}{8 \log(3)} \right\} \right\}$$

(*6*)

Solve[Sqrt[3^n + n] == 3 * Sqrt[2/5], n]

... **Solve:** Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information.

$$\left\{ \left\{ n \rightarrow \frac{18 \log(3) - 5 W(27 \times 3^{3/5} \log(3))}{5 \log(3)} \right\} \right\}$$

(*7*)

Solve[Sqrt[3^n + n] == 7 / (2 Sqrt[3]), n]

... **Solve:** Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information.

$$\left\{ \left\{ n \rightarrow \frac{49 \log(3) - 12 W(81 \sqrt[12]{3} \log(3))}{12 \log(3)} \right\} \right\}$$

(*8*)

Solve[Sqrt[3^n + n] == 4 Sqrt[2/7], n]

... **Solve:** Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information.

$$\left\{ \left\{ n \rightarrow \frac{32 \text{Log}[3] - 7 \text{ProductLog}[81 \times 3^{4/7} \text{Log}[3]]}{7 \text{Log}[3]} \right\} \right\}$$

(*9*)

Solve[Sqrt[3^n + n] == 2.25, n]


... **Solve:** Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information.

$$\frac{81 \log(3) - 16 W(243 \sqrt[16]{3} \log(3))}{16 \log(3)}$$

... **Solve:** Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information.

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... **Solve:** Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information.

 **Solve:** $\frac{b \text{Log}[3] - c \text{ProductLog}[3^9 d \text{Log}[3]]}{c \text{Log}[3]}$ is not a quantified system of equations and inequalities.