

What Should I Know At This Point

1. Write $5\sqrt[3]{10}$ as an entire radical.

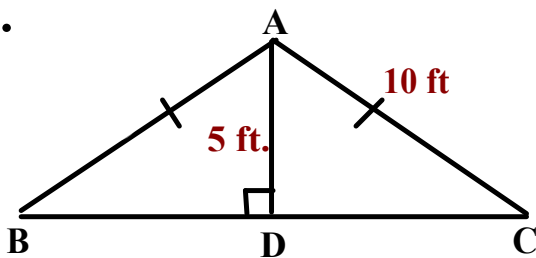


2. Write the following from least to greatest.

$$\sqrt{38}, \quad \sqrt[3]{515}, \quad \frac{13}{3}, \quad \sqrt{2}, \quad \sqrt[3]{128}$$

ESTIMATE !!

3.



In isosceles $\triangle ABC$, what is the length of BC? Write your answer as a mixed radical.

1. Write $5\sqrt[3]{10}$ as an entire radical.

$$\sqrt[3]{10 \times 5 \times 5 \times 5}$$

$$\sqrt[3]{1250}$$

$$\sqrt[3]{10 \times 125}$$

$$\sqrt[3]{1250}$$



2. Write the following from least to greatest.

$$\sqrt{38}, \quad \sqrt[3]{515}, \quad \frac{13}{3}, \quad \sqrt{2}, \quad \sqrt[3]{128}$$

ESTIMATE !!

$$\sqrt{38}$$

$$\sqrt{36} \quad \& \quad \sqrt{49}$$

6 & 7

$$\sqrt[3]{515}$$

$$\sqrt[3]{512} \quad \& \quad \sqrt[3]{729}$$

8 & 9

$$13/3 = 4.3$$

4.3

$$\sqrt{2}$$

$$\sqrt{1} \quad \& \quad \sqrt{4}$$

1 & 2

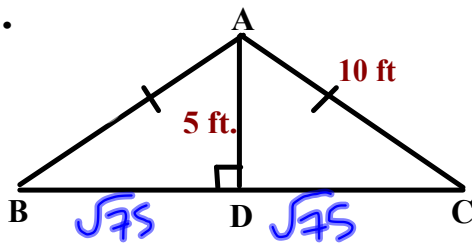
$$\sqrt[3]{128}$$

$$\sqrt[3]{125} \quad \& \quad \sqrt[3]{216}$$

5 & 6

$$\sqrt{2}, \quad 13/3, \quad \sqrt[3]{128}, \quad \sqrt{38}, \quad \sqrt[3]{515}$$

3.



In $\triangle ABD$ Find \overline{BD}

$$a^2 + b^2 = c^2 \quad \text{Rearrange}$$

$$a^2 = c^2 - b^2$$

$$a^2 = 10^2 - 5^2$$

$$a^2 = 100 - 25$$

$$a^2 = 75$$

$$a = \sqrt{75}$$

$$\text{Therefore } \overline{BD} = \sqrt{75}$$

In isosceles $\triangle ABC$, what is the length of BC ? Write your answer as a mixed radical.

$\triangle ABD$ is congruent to $\triangle ACD$

$$\text{Therefore in } \triangle ADC \quad \overline{DC} = \sqrt{75}$$

$$\text{Side } BD + \text{Side } DC = \text{Side } BC$$

$$\sqrt{75} + \sqrt{75} = 2\sqrt{75}$$

$$\text{Reduce } 2\sqrt{3 \times 5 \times 5}$$

$$2 \times 5\sqrt{3}$$

$$10\sqrt{3}$$