**Estimating Square Roots without a Calculator**

Estimate each of the following square roots to the nearest **tenth**. Show your work.

1. $\sqrt{12}$ 2. $\sqrt{20}$
2. $\sqrt{42}$ 4. $\sqrt{33}$

**5.** Write instructions on how to estimate the square root of a number that is not a perfect square to the nearest **tenth**.

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**6.** Sudip estimates that  is about six. Do you agree or disagree? Explain.

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**7.** Is more or less than 10? Explain. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**8.** Is 8.5 a good first guess for $\sqrt{72}$ ? Why or why not?

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