GRADE 8 MATH · CLASSWORK · SPECIAL ED

# Approximate an Irrational Number

SCORE / 25

## 01 Part A · Practice

Find the perfect squares on either side of the number, then square tenths to get closer.

**EXAMPLE**

**Approximate $\sqrt{40}$ to the nearest tenth.**

1. $6^2 = 36$ and $7^2 = 49$, so $6 < \sqrt{40} < 7$.
2. $6.3^2 = 39.69$ and $6.4^2 = 40.96$.
3. 40 is closer to 39.69, so $\sqrt{40} \approx 6.3$.

**WORDS TO KNOW**

| | |
|---|---|
| **approximate** | find a value close to the exact value |
| **perfect square** | a whole number times itself, like $36 = 6^2$ |
| **nearest tenth** | rounded to one decimal place |

**1** ●○○ Between which two consecutive tenths is $\sqrt{23}$? (For example, 4.2 and 4.3.)

**HINT** Start with the whole numbers: $4 < \sqrt{23} < 5$. Then square tenths.

**2** ●○○ Between which two consecutive whole numbers is $\sqrt{46}$?

**HINT** Find the perfect squares just below and just above the number under the root.

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Preview - the full worksheet and its answer key are at primeworksheet.com