Essential Question:
I can approximate non perfect squares

Standard:
8.NS.2

Review

1. **What whole numbers would the $\sqrt{27}$ fall between?**

2. **What whole numbers would the $\sqrt{59}$ fall between?**

Critical Thinking

What is the sum of all the integers between $\sqrt{3}$ and $\sqrt{63}$

Practice

What is the sum of the integers between $\sqrt{12}$ and $\sqrt{92}$

What is the product of the integers betweeı $\sqrt{22}$ and $\sqrt{39}$

Approximating to a Whole Number

Discover what whole numbers would the following square root fall between? Tell how you find your answer.

$\sqrt{11}$

[redacted]

[redacted]

[redacted]

Approxiating to the Nearest Tenth

Example

1st step- approximate the whole numbers → $\sqrt{25}$ $\sqrt{32}$ $\sqrt{36}$

± 5 ± 6

2nd step- subtract the square roots you found → 36 - 25 = 11

3rd step-subtract the square root given and lowest the square root. → 32 - 25 = 7

4th step-divide step 3 into step 2 → $\frac{7}{11}$

$$11\overline{)7.00} = .63 = .6$$

66

40

5th step-Write the lowest whole number in front of your decimal → ± 5.6

Approximate $\sqrt{27}$ to the nearest tenth.

Approximate $\sqrt{59}$ to the nearest tenth.

Practice

Approximate the square root to the nearest whole number

1. $\sqrt{15}$ **2.** $\sqrt{23}$ **3.** $\sqrt{42}$ **4.** $\sqrt{131}$

Reminder- Positve/Negative Solutions

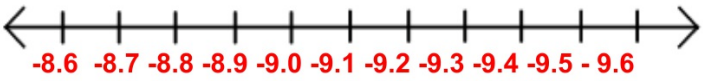
Number Line

Approximate the square root to the nearest tenth. Plot on a number line

$\sqrt{95}$

Positive

Negative



Check For Understanding

Approximate to the nearest tenth. Plot the square root on the nubmer line.

$\sqrt{15}$

$\sqrt{131}$

Exit Ticket

Approximate $\sqrt{48}$ to the nearest tenth.

Extra Practice

Warm-Up
Critical Thinking

Consider the square roots of the whole numbers from 1 to 10. Are there more rational numbers or irrational numbers? Explain your reasoning.

Considerar las raíces cuadradas de los números enteros de a 10. ¿Hay más números racionales o números irracionales? Explicar su razonamiento.

Assessment Problem

Find the $\sqrt{52}$ to the nearest tenth.

Practice Group

1. $\sqrt{5}$

2. $\sqrt{13}$

3. $\sqrt{26}$

4. $\sqrt{58}$