

Daily HW Check: Box 5: Absolute Value # 4

Box 6: Absolute Value # 14

Repeating Decimals to Fractions Practice

Change to fractions

$$1. \overline{.23} = \frac{23}{99}$$

$$2. \underbrace{4.0\overline{4}}_{\times 10} = 40.\overline{4} = 40\frac{4}{9} = \frac{364}{9} \div 10 = \frac{364}{9} \cdot \frac{1}{10} = \frac{364}{90}$$

$$3. \underbrace{2.1\overline{3}}_{\times 10} = 21.\overline{3} = 21\frac{3}{9} = 21\frac{1}{3} = \frac{64}{3} \div 10 = \frac{64}{3} \cdot \frac{1}{10} = \frac{64}{30} = \frac{32}{15}$$

$$4. \underbrace{.12\overline{3}}_{\times 10} = 1.\overline{23} = 1\frac{23}{99} = \frac{122}{99} \div 10 = \frac{122}{99} \cdot \frac{1}{10} = \frac{122}{990} = \frac{61}{495} = \frac{32}{15}$$

Go Over HW

$$1) |-3| = \underline{3}$$

$$2) |-3.7| = \underline{3.7}$$

$$3) |92| = \underline{92}$$

Compare by using $<$, $>$, $=$.

$$4) |-3| \underline{\hspace{1cm}} |3| \rightarrow 3 \underline{=} 3$$

$$5) |-4| \underline{\hspace{1cm}} 6 \rightarrow 4 \underline{<} 6$$

$$6) |2.6| \underline{\hspace{1cm}} |-2.7| \quad 2.6 \underline{<} 2.7$$

$$7) |-8| \underline{\hspace{1cm}} |-9| \quad 8 \underline{<} 9$$

$$8) 9 \underline{\hspace{1cm}} |-9| \quad 9 \underline{=} 9$$

-) Two numbers have an absolute value of 37. Which of the two numbers is further from 1 on the number line?

$$|-37| = 37 \text{ and } |37| = 37$$

So, the numbers
-37 and 37

-37 is further from

- 0) Keith has -\$190 in his savings account. Aisha has \$80 in her savings account and Sonya has -\$250 in her savings account.

- a) Who has the most amount of money in their savings account?

Aisha has the most money at \$80.

- b) Who has the least amount of money in their savings account?

Sonya has the least amount of money
-\$250.

Determine whether the following are rational or irrational and explain why.

- 1) 3.56326... irrational → non-ending
- 2) -241 rational → integer
- 3) 0.325 rational → terminating decimal
- 4) 7 rational → natural, whole and integer
- 5) $\frac{1}{4}$ rational → it is fraction

Estimating a Square Root

Method 1: Estimate by finding the two closest squares.

Steps:

- 1) Find the perfect square below the radicand.
- 2) Find the perfect square above the radicand.
- 3) Name the two integer values that the radicand is between.

} number
under the
symbol

$$\sqrt{63} = 49 < 63 < 64 \rightarrow \sqrt{49} < \sqrt{63} < \sqrt{64} \rightarrow 7 < \sqrt{63} < 8$$

closer to 8

$$\sqrt{95} = 81 < 95 < 100 \rightarrow \sqrt{81} < \sqrt{95} < \sqrt{100} \rightarrow 9 < \sqrt{95} < 10$$

closer to 10

Method 2: Using a calculator. Use the square root function of your calculator.

$$\sqrt{63} = 7.94$$

$\boxed{2^{\text{nd}}}$ $\boxed{x^2}$ enter radicand

$$\sqrt{95} = 9.75$$

What is the value of $\sqrt{34}$ to the nearest integer?

$$\begin{aligned} 25 &< 34 < 36 \\ \sqrt{25} &< \sqrt{34} < \sqrt{36} \\ 5 &< \sqrt{34} < 6 \\ &\text{closer to } 6 \end{aligned}$$

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What is the value of $\sqrt{53}$ to the nearest integer?

$$\begin{aligned} 49 &< 53 < 64 \\ \sqrt{49} &< \sqrt{53} < \sqrt{64} \\ 7 &< \sqrt{53} < 8 \\ &\text{closer to } 7 \end{aligned}$$

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