Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour : \_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_

**Number Noticing**

**Directions**: Evaluate the following square roots.

|  |  |  |  |
| --- | --- | --- | --- |
| √49  | √25 | √16 | √81 |
| √100 | √9 | √36 | √144 |

What do you notice after evaluating the above square roots? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Are these square roots rational or irrational? Provide evidence.

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**Directions**: Evaluate the following square roots.

|  |  |  |  |
| --- | --- | --- | --- |
| √3  | √15 | √172 | √43 |
| √10 | -√78 | √33 | -√21 |

What do you notice after evaluating the above square roots? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Are these square roots rational or irrational? Provide evidence.

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**Directions:** Change the following fractions to decimals.

|  |  |  |  |
| --- | --- | --- | --- |
| $$\frac{1}{3}$$ | $$\frac{4}{6}$$ | $$\frac{4}{9}$$ | $$\frac{1}{11}$$ |
| $$\frac{2}{3}$$ | $$\frac{5}{6}$$ | $$\frac{2}{9}$$ | $$\frac{8}{12}$$ |

What do you notice after changing the above fractions to decimals?

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Are these resulting decimals rational or irrational? Provide evidence.

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**Directions:** Change the following fractions to decimals.

|  |  |  |  |
| --- | --- | --- | --- |
| $$\frac{5}{15}$$ | $$\frac{3}{6}$$ | $$\frac{4}{12}$$ | $$\frac{3}{4}$$ |
| $$\frac{2}{8}$$ | $$\frac{25}{100}$$ | $$\frac{3}{9}$$ | $$\frac{8}{64}$$ |

What do you notice after changing the above fractions to decimals?

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Are these resulting decimals rational or irrational? Provide evidence.

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**Directions:** Change the following decimals to fractions.

|  |  |  |  |
| --- | --- | --- | --- |
| 0.23 | 0.8 | 0.12 | 0.125 |

**Hint: **

**Directions:** Change the following decimals to fractions.

|  |  |  |
| --- | --- | --- |
| 0.2222222…  | 0.333333333… | 0.1212121212… |

What is the big idea when changing repeating decimals to fractions?

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