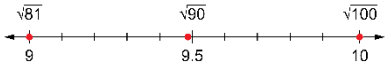
Number

# Activity 1 Assessment

## Investigating Perfect Squares and Square Roots

| Investigating Perfect Squares and Square Roots | | | |
|---|---|---|---|
| Uses exponential notation to show factors of a number<br><br>$25 = 5 \times 5$<br>$= 5^2$ | Identifies a perfect square and a non-perfect square<br>$64 = 8 \times 8$<br>$= 8^2$<br>64 is a perfect square because it can be written as the product of two equal integers factors<br><br>$63 = 3 \times 3 \times 7$<br>$= 3^2 \times 7$<br>63 is not a perfect square because it cannot be written as the product of two equal integer factors. There is a single prime factor of 7 leftover | Determines the square root of a perfect square<br><br>$144 = 2 \times 2 \times 2 \times 2 \times 3 \times 3$<br>$= 2 \times 2 \times 3 \times 2 \times 2 \times 3$<br>$= 12 \times 12$<br>$\sqrt{144} = 12$ | Estimates the square root of a non-perfect square<br><br>I know that $\sqrt{81} = 9$ and $\sqrt{100} = 10$, so I estimate that $\sqrt{90}$ is approximately 9.5 because 90 is about halfway between 81 and 100.<br><br>  |
| **Observations/Documentation** | | | |
| | | | |

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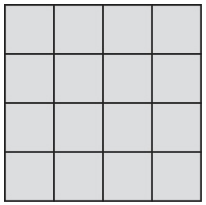
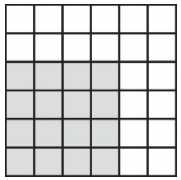
## Investigating Perfect Squares and Square Roots

| Competency: Representing | | | |
|---|---|---|---|
| Represents a whole number using tiles to determine whether it is a perfect square<br><br>"I can use 16 tiles to make a square, so 16 is a perfect square."<br><br>  | Represents a whole number on a grid to determine whether it is a perfect square<br><br>"I can shade 16 grid squares to make a square, so 16 is a perfect square."<br><br>  | Records all the factors of a whole number to determine whether it is a perfect square<br><br>"The factors of 16 are: 1, 2, 4, 8, 16. Since there are an odd number of factors, 16 is a perfect square." | Represents a whole number as a product of its prime factors to determine whether it is a perfect square<br><br>"I can write 16 as a product of its prime factors: $16 = 2 \times 2 \times 2 \times 2$. I can combine the prime factors to write $16 = 4 \times 4$, a product of two equal integer factors. So, 16 is a perfect square." |
| **Observations/Documentation** | | | |
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