**Math 8: Chapter One Outcomes: Number Relationships**

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| **Lesson Goals***Place a checkmark in the box that best describes your work.* | **Yes, on my own** | **Yes, with help** | **Sometimes/ Not sure** | **Not yet** |
| 1. I can determine the factors of a perfect square, and explain why one of the factors is the square root and the others are not.
 |  |  |  |  |
| 1. I can use different strategies to identify perfect squares.
 |  |  |  |  |
| 1. **I can use different strategies to determine the square root of a perfect square.**
 |  |  |  |  |
| 1. **I can estimate the square root of numbers that are not perfect squares**.
 |  |  |  |  |
| 1. **I can determine the square of a given number.**
 |  |  |  |  |
| 1. I can create and solve problems involving a perfect square.
 |  |  |  |  |
| 1. **I can model, apply, and explain the Pythagorean theorem.**
 |  |  |  |  |
| 1. I can use diagrams to solve problems about squares and square roots.
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**Chapter One Vocabulary**

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| --- | --- |
| **Term** | **Definition** |
| Perfect Square |  |
| Square Root |  |
| Pythagorean Theorem |  |
| Prime Number |  |
| Factor |  |

**Chapter One: Number relationships**

Extra Help: Workbook Chapter 3

**Outcome 1:** I can determine the factors of a perfect square, and explain why one of the factors is the square root and the others are not.

Examples: Pg.7 Example 3, Pg.13 Example 2

Basic Questions: Pg.8 #7; Pg.14 #3,4,5; Pg.15 #12

Advanced Questions: Pg.9 #9,17; Pg.15 #18,19

**Outcome 2:** I can use different strategies to identify perfect squares.

Examples: Pg. 6 Example 1,2

Basic Questions: Pg.8 #1-5,8; Pg.9 #10

Advanced Questions: Pg.9 #11

**Outcome 3: I can use different strategies to determine the square root of a perfect square.**

Basic Questions: Pg.13 #2; Pg.14 #6,8; Pg.15 #16,17

Advanced Questions: Pg.14 #7, 11; Pg.15 #13

**Outcome 4: I can estimate the square root of numbers that are not perfect squares.**

Examples: Pg.17 Example 1; Pg.18 Example 2

Basic Questions: Pg.15 #14,15; Pg.18 #1-5; Pg.20 #9,10,11,14,15

Advanced Questions: Pg.19 #7; Pg.20 #12

**Outcome 5: I can determine the square of a given number.**

Basic Questions: Pg.8 #6; Pg.9 #14

Advanced Questions: Pg.9 #12,13,15,16

**Outcome 6:** I can create and solve problems involving a perfect square.

Examples: Pg.24

Basic Questions: Pg.20 #13; Pg.35 #8

Advanced Questions: Pg.35 #2

**Outcome 7: I can model, apply, and explain the Pythagorean theorem.**

Examples: Pg.27 Example 1; Pg.28 Example 2; Pg.29 Example 3

Basic Questions: Pg.29 #1,2; Pg.30 #7,8; Pg.31 #9,10

Advanced Questions: Pg.30 #3,4,5,6; Pg.30 #11,12,13,14

**Outcome 8:** I can use diagrams to solve problems about squares and square roots.

Examples: Pg.12 Example 1; Pg.33 Example 1; Pg.34 Example 2

Basic Questions: Pg.13 #1; Pg.14 #9,10; Pg.19 #6; Pg.35 #3,5,6

Advanced Questions: Pg.19 #8; Pg.20 #16; Pg.35 #1,4,7

Enrichment: Chapter Task pg.41 Grade 10: Chapter 2