

Just In Time Quick Check
Standard of Learning (SOL) 4.8c

Strand: Measurement and Geometry

Standard of Learning (SOL) 4.8c

The student will when given the equivalent measure of one unit, identify equivalent measures of length, weight/mass, and liquid volume between units within the U.S. Customary system.

Grade Level Skills:

- Given the equivalent measure of one unit, identify equivalent measures between units within the U.S. Customary system for:
 - length (inches and feet, feet and yards, inches and yards); yards and miles;
 - weight/mass (ounces and pounds); and
 - liquid volume (cups, pints, quarts, and gallons).

Just in Time Quick Check

Just in Time Quick Check Teacher Notes

Supporting Resources:

- VDOE Mathematics Instructional Plans (MIPS)
 - [Body Part Measurement](#) (Word / [PDF](#))
 - [Fruit Basket Measurement](#) (Word / [PDF](#))
- VDOE Algebra Readiness Remediation Plans
 - [Measure Bingo](#) (Word / [PDF](#))
- VDOE Word Wall Cards: Grade 4 [Word](#) / [PDF](#)
 - Ounces
 - Pounds
 - Inches
 - Feet
 - Yards
 - Miles
 - Cups
 - Pints
 - Quarts
 - Gallons
- VDOE Instructional Videos for Teachers:
 - [Converting Units \(grades 3-8\)](#)
 - [Liquid Measure \(grades 4-8\)](#)

Supporting and Prerequisite SOL: [3.7a](#), [3.7b](#), [2.8a](#), [2.8b](#)

SOL 4.8c - Just in Time Quick Check

1)

12 inches = 1 foot

Determine the equivalent measurements.

2 feet = _____ inches

5 feet = _____ inches

2)

3 feet = 1 yard

Determine the equivalent measurements and fill in the missing spaces in the chart below.

Yard(s)	Foot/Feet
1	3
3	
	15
	30
12	

3) There are 1,760 yards in 1 mile. Using this information, determine the equivalent measurements and fill in the missing spaces in the chart below.

Mile(s)	1		4	7	
Yard(s)	1,760	3,520			17,600

- 4) There are 16 ounces in 1 pound. Using this information, fill in the missing spaces in the chart below.

Ounce(s)	Pound(s)
16	1
	4
128	
	12

5)

36 inches = 1 yard

Determine the equivalent measurements.

$$2\frac{1}{2} \text{ yards} = \underline{\hspace{2cm}} \text{ inches}$$

$$\underline{\hspace{2cm}} \text{ yards} = 72 \text{ inches}$$

- 6) There are 4 cups in 1 quart. Using this information, fill in the missing spaces in the chart below.

Cup(s)	4		52	
Quart(s)	1	$3\frac{1}{2}$		18

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Common Errors/Misconceptions and their Possible Indications

1)

12 inches = 1 foot

Determine the equivalent measurements.

2 feet = _____ inches

5 feet = _____ inches

Some students may have difficulty finding the relationship between units provided. This may prevent students from applying the pattern or rule necessary to fill in the blanks. Teachers may wish to provide experiences with manipulatives to help students see the relationship between the unit measurement and how it shrinks and grows multiplicatively.

2)

3 feet = 1 yard

Determine the equivalent measurements and fill in the missing spaces in the chart below.

Yard(s)	Foot/Feet
1	3
3	
	15
	30
12	

Some students may have difficulty finding the relationship between feet and yards. This might indicate that students who have difficulty with this relationship may want to fill in the columns on the chart instead of working across the rows. Teachers may wish to guide students to work row by row, identifying the horizontal rule as they move down the chart. Teachers may wish to provide experiences with input/output tables to help students see the connection between the given unit and the table. Also, teachers may wish to provide exploration with manipulatives that supports the relationship in the table.

- 3) There are 1,760 yards in 1 mile. Using this information, determine the equivalent measurements and fill in the missing spaces in the chart below.

Mile(s)	1		4	7	
Yard(s)	1,760	3,520			17,600

Students may have difficulty with this chart because of its orientation. This may indicate that a student tries to find an incremental pattern in one unit of measure instead of finding a pattern or rule between the units of measure. Teachers may wish to expose students to both horizontal and vertical tables.

- 4) There are 16 ounces in 1 pound. Using this information, fill in the missing spaces in the chart below.

Ounce(s)	Pound(s)
16	1
	4
128	
	12

Students may have difficulty completing this chart because the relationship between the units when read left to right moves from the smaller unit (ounces) to the larger unit (pounds). Teachers may wish to provide opportunities that have students exploring equivalent relationships with smaller units to larger units, and vice versa. Additionally, experience with measuring items in ounces and pounds will assist students understanding of the relationship between the two measurements.

5)

36 inches = 1 yard

Determine the equivalent measurements.

$$2\frac{1}{2} \text{ yards} = \underline{\hspace{2cm}} \text{ inches}$$

$$\underline{\hspace{2cm}} \text{ yards} = 72 \text{ inches}$$

A common misconception some students may make is to determine the equivalency for the first missing blank and continue to use the same equivalency relationship to determine the second missing blank. This may indicate that a student multiplies each given measurement by 36 to determine the equivalent measurement. Teachers may wish to have students explore additional number relationships by using yardsticks and number lines to discover these equivalencies.

6) There are 4 cups in 1 quart. Using this information, fill in the missing spaces in the chart below.

Cup(s)	4		52	
Quart(s)	1	$3\frac{1}{2}$		18

Some students may have difficulty determining the fractional part of a quart that is equivalent to the specified amount of cups. Teachers may wish to have students explore fractional number relationships by using manipulatives to discover these fractional equivalencies.