5.M.1: Convert among different-sized standard measurement units within a given measurement system and use these conversions in solving multi-step, real-world problems.	
Reporting Category: Geometry, Measurement, and Data Analysis	**Subdomain**: Measurement and Data Analysis
5.M.1 Instructional Framework	
Assessed On: ☐ Checkpoint 1 ☐ Checkpoint 2 ☐ Checkpoint 3 ☑ Summative	
Content Limits: ● Include only measurement conversions within a single system. ● Limit decimals to the hundredths place. ● Include measurement values that are whole numbers, decimals, and/or fractions. ● Remove the fraction key from the designated keypad for items that require the correct response to be entered as a whole number or decimal.	
Clarifications: ● Grade-level reference sheet with conversions will be provided. ● The keypad in the ILEARN testing system does not allow students to enter a comma between each period in a multi-digit number. (Example: 13,323 would be entered as 13323.)	
Calculator Availability: Not Allowed	
Expected Academic Vocabulary: convert, meter (m), gram (g), liter (l), kilo-, hecto-, deca-, deci-, centi-, milli-, ounce (oz), cup (c), pint (pt), quart (qt), gallon (gal), pound (lb), ounce (oz), inch (in), foot (ft), yard (yd), mile (mi), second, minute, hour, day, week, month, year	
Examples of Context and Varying Difficulty Levels	
Context: Easy	Conversions use multiplication of whole numbers.
Context: Medium	Conversions use division of whole numbers.
Context: Difficult	Conversions use multiplication and/or division of whole, decimal, and/or fractional values.
Proficiency Level Descriptors and Example Items	
Looking Back: 4.M.2 ILEARN Item Specification	**Looking Ahead**: 6.GM.1 ILEARN Item Specification
Below Proficiency: Convert among different-sized standard measurement units within a given measurement system.	
Enter the number of meters equal to 9 kilometers.	This item is DOK 1

☐ m = 9 km [ ] meters **Answer:** 9000	because students must complete one conversion within a system. This is easy because it involves a conversion using whole numbers and multiplication.
Enter the number of grams equal to 70 milligrams. ☐ g = 70 mg [ ] grams **Answer:** 0.07	This item is DOK 1 because students must complete one conversion within a system. This is difficult because it involves conversions using multiplication and/or division of whole, decimal, and/or fractional values.
Enter the number of pints equal to 14 cups. ☐ pints = 14 cups [ ] pints **Answer:** 7	This item is DOK 1 because students must complete one conversion within a system. This is medium difficulty because it involves conversions using division of whole numbers.
Approaching Proficiency: Solve real-world problems that require one conversion among different-sized standard measurement units within a given measurement system.	
A mother purchases 4 $\frac{1}{4}$ pounds of rice for a family gathering. Each serving of rice is 1 ounce. How many servings of rice does she have? a. 4 $\frac{1}{4}$	This item is DOK 3 because students must complete conversions within a system and make sense of the outcome. This is difficult because it involves conversions

b. $8\frac{1}{2}$ c. 42 **d. 68** **Answer:** d	using multiplication and/or division of whole, decimal, and/or fractional values.
A student needs 12.5 yards of string for a science project. The student already has 17.5 feet of string. How many more feet of string does the student need for the science project? [ ] feet **Answer:** 20	This item is DOK 3 because students must complete conversions within a system and make sense of the outcome. This is difficult because it involves conversions using multiplication and/or division of whole, decimal, and/or fractional values.
At Proficiency: Solve multi-step real-world problems that require conversions among different-sized standard measurement units within a given measurement system.	
A pet owner fills a small plastic pool for his dog to play in. • The pool already has 6 $\frac{1}{2}$ **gallons** of water in it. • He adds 18 **pints** of water. How many **gallons** of water are now in the pool? [ ] gallons **Answer:** 8 ¾ or any equivalent answer	This item is DOK 3 because students must complete conversions within a system and make sense of the outcome. This is difficult because it involves conversions using multiplication and/or division of whole, decimal, and/or fractional values.
A person spends 3 **hours** mowing his lawn. His neighbor spends half that time mowing his lawn. What is the amount of time, in **minutes**, that the neighbor spent mowing his lawn? [ ] minutes	This item is DOK 3 because students must complete conversions within a system and make sense of the outcome. This is difficult because

Answer: 90	it involves conversions using multiplication and/or division of whole, decimal, and/or fractional values.
Above Proficiency: Solve complex real-world problems that require multiple operations and conversions among different-sized standard measurement units within a given measurement system.	
A teacher prepares lemonade for the after-school club. ● Each container of lemonade holds 2 **liters** of juice. ● The teacher will prepare 3 glasses of lemonade for each student. ● Each glass holds 250 **milliliters** of lemonade. ● The teacher will have no more than 18 students. What is the **least** number of containers of lemonade that the teacher will need to prepare? **a. 7** b. 10 c. 67 d. 6,750 **Answer:** a	This item is DOK 3 because students must complete multiple conversions within a system and self-monitor their progress as they make sense of the outcome. This is medium difficulty because it involves conversions using division of whole numbers.
A teacher ran a large program on his computer that needed four sets of updates. ● The first set of updates ran for 1 **day** and 2 **hours**. ● The second set of updates ran for 35 **minutes**. ● The third set of updates ran for 180 **minutes**. ● The fourth set of updates ran for 1 **hour** and 25 **minutes**. How long, in **hours**, did it take for all of the updates to complete? Enter your answer in the response box. [ ] hours **Answer:** 31	This item is DOK 3 because students must complete multiple conversions within a system and self-monitor their progress as they make sense of the outcome. This is medium difficulty because it involves conversions using division of whole numbers.