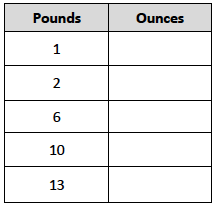
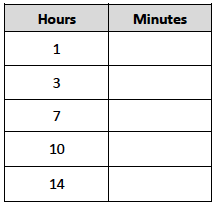
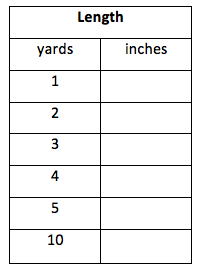
Name Date

1. Solve for the following conversions. Draw tape diagrams to model the equivalency.
   1. 1 gal = \_\_\_\_\_\_ qt b. 3 qt 1pt = \_\_\_\_\_\_ pt
2. Complete the following tables:
   1.  b.

The rule for converting pounds to ounces is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The rule for converting hours to minutes is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. Answer “true” or “false” for the following statements. Explain how you know using pictures, numbers, or words.
   1. 68 ounces < 4 pounds \_\_\_\_\_\_\_\_\_\_\_\_\_
   2. 920 minutes > 17 hours \_\_\_\_\_\_\_\_\_\_\_\_\_
   3. 38 inches = 3 feet 2 inches \_\_\_\_\_\_\_\_\_\_\_\_\_
2. Convert the following measurements.
   1. Express the length of a 9 kilometer trip in meters. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Express the capacity of a 3 liter 240 milliliter container in milliliters. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Express the length of a 3 foot 5 inch fish in inches. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. Express the length of a 2 hour movie in minutes. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   5. Express the weight of a pound wolverine in ounces. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Find the following sums and differences. Show your work.
   1. 4 gal 2 qt + 5 gal 3 qt = \_\_\_\_\_\_\_ gal \_\_\_\_\_\_\_ qt
   2. 6 ft 2 in 9 inches = \_\_\_\_\_\_\_ ft \_\_\_\_\_\_\_ in
   3. 3 min 34 sec + 7 min 46 sec = \_\_\_\_\_\_\_ min \_\_\_\_\_\_\_ sec
   4. 24 lb 9 oz 3 lb 11 oz = \_\_\_\_\_\_\_ lb \_\_\_\_\_\_\_ oz
4. Complete the table. b. Describe the rule for converting yards   
    to inches.

1. How many inches are in 15 yards?
2. Jacob says that he can find the number of inches in 15 yards by tripling the number of inches in 5 yards. Does his strategy work? Why or why not?
3. A blue rope in Garret’s camping backpack is 6 yards long. The blue rope is 3 times as long as a red rope. A yellow rope is 2 feet 7 inches shorter than the red rope. What is the difference in length between the blue rope and the yellow rope?

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| End-of-Module Assessment Task Topics A–C  Standards Addressed |
| Use the four operations with whole numbers to solve problems.  4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 x 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.  4.OA.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison. (See CCSS Glossary, Table 2.)  4.OA.3 Solve multi-step word problems posed with whole numbers and having whole number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.  Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.  4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. *For example, know that 1 ft is 12 times as long as 1 in. Express length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), …*  4.MD.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. |

Evaluating Student Learning Outcomes

A Progression Toward Mastery is provided to describe steps that illuminate the gradually increasing understandings that students develop *on their way to proficiency.* In this chart, this progress is presented from left (Step 1) to right (Step 4).  The learning goal for each student is to achieve Step 4 mastery.  These steps are meant to help teachers and students identify and celebrate what the student CAN do now and what they need to work on next.

| A Progression Toward Mastery | | | | |
| --- | --- | --- | --- | --- |
| Assessment  Task Item  and  Standards Assessed | STEP 1  Little evidence of reasoning without a correct answer.  (1 Point) | STEP 2  Evidence of some reasoning without a correct answer.  (2 Points) | STEP 3  Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer.  (3 Points) | STEP 4  Evidence of solid reasoning with a correct answer.  (4 Points) |
| **1**  4.OA.1  4.MD.1 | The student gives an incorrect answer for both parts. | The student correctly answers and models one of the two parts. | The student correctly answers both parts but has small errors in the models. Or, the student correctly answers one part but draws two accurate models. | The student correctly draws a tape diagram to model each part and answers:   1. 4 qt. 2. 7 pt. |
| **2**  4.OA.1  4.MD.1 | The student completes less than half of the problem correctly. | The students correctly completes one of the two tables with the accompanying rule. | The student correctly completes both tables but inaccurately describes the rules for one or both tables. Or, the students accurately completes one table and identifies the rule for both tables. | The student correctly answers:   1. 16, 32, 96, 160, and 208 ounces; identifies an accurate rule, such as *multiply by 16*. 2. 60,180,420,600, and 840 minutes; identifies an accurate rule, such as *multiply by 60*. |
| **3**  4.MD.1 | The student correctly answers less than two parts correctly. | The students correctly answers two of the three parts, providing some reasoning for each part. | The student correctly answers all three parts and provides solid reasoning for at least two parts. Or, the students correctly answers two of the three parts and provides solid reasoning for at least two parts. | The student correctly explains each answer using pictures, numbers, or words and correctly answers:   1. False. 2. False. 3. True. |
| **4**  4.MD.1 | The student answers fewer than two parts correctly. | The student correctly answers two or three of the parts. | The student correctly answers four of the five parts. Or, the student answers all parts correctly but without labeling the units. | The student correctly answers:   1. 9,000 meters. 2. 3,240 milliliters. 3. 41 inches. 4. 135 minutes 5. 390 ounces. |
| **5**  4.MD.1  4.MD.2 | The student answers fewer than two parts correctly. | The student correctly answers two of the four parts. | The student correctly answers three of the four parts. Or, the student answers all parts correctly but does not show work. | The student correctly answers:   1. 10 gal 1 qt. 2. 5 ft 5 in. 3. 11 min 20 sec. 4. 20 lb 14 oz. |
| **6**  4.OA.1  4.OA.2  4.OA.3  4.MD.1  4.MD.2 | The student answers fewer than three parts correctly. | The student correctly answers three of the five parts. | The student correctly answers all parts but does not provide solid reasoning or evidence of showing work in two of the five parts. Or, the student correctly answers four of the five parts. | The student correctly:   1. Completes the table: 36, 72, 108, 144, 180, 360 inches. 2. Describes the rule, such as *multiply the number of yards times 36*. 3. Solves for 540 inches in 15 yards. 4. Answers *yes*, and provides an accurate explanation such as *15 yards is 3 times as much as 5 yards, so 3 × 180 inches = 540 inches*. 5. Answers *14 feet 7 inches* using RDW. |

