3.MD.A

Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

1. A music class starts at 1:32 p.m. and ends at 2:55 p.m. Write the length, in minutes, of the music

class.

2. Harold buys 2-liter bottles of juice for a picnic. He buys 8 bottles. How many liters of juice did

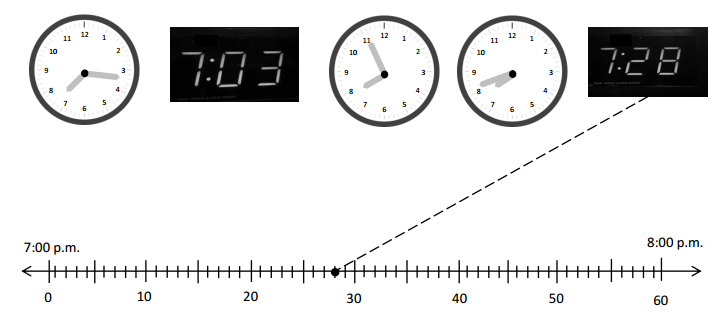
Harold buy?

3. A piece of celery has a mass of 48 grams. A carrot has a mass of 35 grams more than the piece

of celery. What is the mass of the carrot?

4. Plot a point on the number line for the times shown on the clocks below. Then draw a line to

match the clocks to the points.



5. Cole read his book for 25 minutes yesterday and for 28 minutes today. How many minutes did

Cole read altogether? Model the problems on the number line and write an equation to solve.

A number line with scale from 0 to 60. There are hashmarks on the number line at intervals of 5 from 0 to 60.

Equation: Cole read for \_\_\_\_\_minutes.

6. Nessa tells her brother that 1 kilogram of rice weighs the same as 10 bags containing 100 grams

of beans each. Do you agree with her? Explain why or why not.

**Teacher Material**

3.MD.A

Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

| **Question** | **Claim** | **Key/Suggested Rubric** |
| --- | --- | --- |
| 1[[1]](#footnote-1) | 1 | **1 point:** 83 minutes |
| 21 | 1 | **1 point:** 16 liters |
| 31 | 1 | **1 point:** 83 grams |
| 4[[2]](#footnote-2) | 2 | **1 point:**  At the top, five clocks are shown. From left to right, the first analog clock shows the hour hand between 7 and 8 and the minute hand slightly past 3. A line is drawn from this clock to the number line below to 7:17. The second digital clock shows 7:03. A line is drawn from this clock to the number line below to 7:03.  The third analog clock shows the hour hand between 7 and 8 and the minute hand slightly past 11. A line is drawn from this clock to the number line below to 7:55. The fourth analog clock shows the hour hand between 7 and 8 and the minute hand slightly past 8. A line is drawn from this clock to the number line below to 7:42. The fifth digital closk shows 7:28. A dashed line is drawn from the fifth digital clock to a point on the number line below the clocks. The number line below the clocks is labeled 7:00 p.m. at the left end and 8:00 p.m. at the right end. There are hasmarks on the number line from 0 to 60. The scale on the number line is 0, 10, 20, 30, 40, 50, and 60. |
| 5[[3]](#footnote-3) | 4 | **3 points:** Draws a model, writes an equation, and writes 53.  A number line with scale from 0 to 60. There are hashmarks on the number line at intervals of 5 from 0 to 60. From 0 to 25 is shaded blue. From 25 to 53 is shaded red.  25 + 28 = m and Cole read for 53 minutes.  **2 point:** Does two of the following: Draws a model, writes an equation, or writes 53.  **1 point:** Does one of the following: Draws a model, writes an equation, or writes 53 OR writes an incorrect equation but following though in solving it correctly. |
| 6[[4]](#footnote-4) | 3 | **1 point:** I do agree. There are 1000 grams in a kilogram and 10 x 100 = 1000 so the 10 bags weight 1 kilogram. |

1. From Smarterbalanced.org. Grade 3, Claim 1, Target G Item Specifications. Internet. Available from <http://www.smarterbalanced.org/smarter-balanced-assessments/>; accessed 11/2015. [↑](#footnote-ref-1)
2. From EngageNY.org of the New York State Education Department. Grade 3 Mathematics Module 2, Topic A, Lesson 3. Internet. Available from <https://www.engageny.org/resource/grade-3-mathematics-module-2-topic-lesson-3>; accessed 11/2015. [↑](#footnote-ref-2)
3. From EngageNY.org of the New York State Education Department. Grade 3 Mathematics Module 2, Topic A, Lesson 5. Internet. Available from <https://www.engageny.org/resource/grade-3-mathematics-module-2-topic-lesson-5>; accessed 11/2015. [↑](#footnote-ref-3)
4. From EngageNY.org of the New York State Education Department. Grade 3 Mathematics Module 2, Topic B, Lesson 7. Internet. Available from <https://www.engageny.org/resource/grade-3-mathematics-module-2-topic-b-lesson-7>; accessed 11/2015. [↑](#footnote-ref-4)