

## **2024 MCAS Mathematics Grade 10 Constructed Response Webinar Transcript**

### **Slide 1 – Webinar Title**

Welcome to our presentation on the Scoring of Grade 10 MCAS Constructed Response questions. My name is Jim Verdolino, and I'm part of the MCAS Mathematics Test Development Team at DESE.

### **Slide 2 – Agenda**

During this presentation, I will review the test development and the scoring processes. I will provide an overview of how questions are created, reviewed, field tested, and scored.

Then, I will review two grade 10 MCAS constructed response questions that were previously released. I will review samples of student responses at each score level, and then I will allow you to independently score some student responses for each question. Finally, I will share some online MCAS resources that are available to you, your students, and their families.

### **Slide 3 – Life Cycle**

Before I review the constructed response questions, it's important for you to have an understanding of how questions, which we sometimes refer to as items, end up on an operational MCAS test. An operational question is a question that counts towards the student's score, and has already been through a process that we call the Life Cycle of an MCAS Mathematics Question.

As you can see, there are many steps to getting a question onto an operational MCAS test. Important contributors to this process are the teams of current educators and content experts from various districts, at multiple points throughout the process, who share their expertise on the development of the questions. This is something of which the Commonwealth is very proud, as not all states have educators involved throughout their test construction processes.

We have two educator committees – the Assessment Development Committee or ADC (in the grey boxes) and the Bias and Sensitivity Committee or BSC (in the blue boxes) – both of whom review the questions twice within the life cycle of the question.

There is an Assessment Development Committee for each grade level and content area and a Bias and Sensitivity Committee for grades 3-10. The committees are tasked with ensuring that the questions on the MCAS tests are grade-level appropriate, accurate, aligned to the Massachusetts State Curriculum Frameworks, and free from bias.

Let's review this process.

The questions are first submitted to DESE from the MCAS testing contractor. Once received, test developers at DESE review each question before they are brought to the ADC for review. As mentioned, the educators on the ADC review the questions for alignment to the state standards, grade-level appropriateness, etc. At the ADC meetings, questions are edited as needed, based on

educator feedback. Questions can be accepted as is, accepted with edits, or rejected. All questions that are accepted or accepted with edits are then reviewed by members of the BSC. The BSC reviews the questions to identify any bias or sensitivity concerns, and to make recommendations for the removal of such concerns. At the BSC meetings, questions are edited as needed, based on feedback. Questions can again be accepted as is, accepted with edits, or rejected.

Questions that are cleared to move forward in the process are moved to a Field Test Eligible Bank. Any question in the Field Test Eligible Bank may be selected to be field tested during any given test administration. However, before the questions are included on the MCAS test for field testing, they are reviewed for content and grammar by content experts from higher education, as well as editorial staff from both DESE and the testing contractor.

Once the questions are field tested during Test administration (the green box), the test is separated into operational and field test questions. The operational questions that count towards the students' scores are scored and the results are sent to the districts. Multiple choice and technology enhanced field test questions are machine-scored, but the constructed response field test questions enter the next part of the cycle known as Benchmarking, where samples of student work are reviewed and compiled in preparation to train scorers. I will explain this process in depth in a later slide. Once the student responses are benchmarked, they are then hand-scored by hundreds of trained scorers, and the data for all field test questions are forwarded to both the ADC and the BSC for an additional review.

The ADC and the BSC review the data for each field test question using parameters provided by DESE, such as determining whether a question was too easy or too difficult and/or if a question was not accessible to students at all levels. Questions are either accepted or rejected at these meetings. Rejected questions can be edited and field tested again at the recommendation of the ADC or the BSC. Accepted questions cannot be edited, and are moved to a Common Eligible bank, where they may be used as an MCAS operational question to count towards a student's score on a future MCAS test.

From beginning to end, this process takes about two years, and as you can see, educators play an integral role throughout the process.

#### **Slide 4 – Constructed Response Questions**

Unlike selected response and short answer questions, students can write, show, and/or explain their strategies used when answering constructed response questions.

MCAS constructed response questions are made up of multiple parts and are typically scaffolded to make the question accessible to all students. Students must answer all parts correctly to receive full credit. Responses are scored holistically, based on the student's understanding of the standards, from 0 to 4 points in grade 10.

#### **Slide 5 – Things to Know**

In constructed response questions, students do not lose credit for spelling, grammar, or punctuation errors. And student responses need not be complete sentences. If a question asks a student to find the volume of a figure, and the student correctly finds the volume and the surface area, only the volume will be scored. Any information not related to what is being asked is ignored.

In some of the sample student responses that you'll see in later slides, you will learn that students can use an incorrect answer from one part correctly in subsequent parts and receive credit in those parts. That is, students can receive credit for correctly solving part B having used their incorrect answer from part A in their explanation.

Students may receive between 0 and 4 points for constructed response questions in grade 10. All assigned score points are whole number points. A student will never receive a score, for example of 2.5.

Students can respond to constructed response questions in multiple ways. One student may choose to show all their calculations, while another student may choose to explain step by step how they determined their answer.

### **Slide 6 – Benchmarking Process**

I referenced the Benchmarking process in my review of the Life Cycle of an MCAS Mathematics question. Once test administration is completed, hundreds of student responses for the field test constructed response questions are gathered and sent to test developers at DESE and the testing contractor. Each test developer reviews the responses, and scores them ahead of a Benchmarking meeting. At the meeting, the scores, along with all the various strategies demonstrated by the students, are discussed and compiled to create training materials that will be used to train scorers.

The training materials consist of the question, the scoring guides, student work that show a range of scores and types of calculations, computations and explanations, detailed instructions that are referred to as scoring notes on how to score said responses, and notes on how to distribute points.

### **Slide 7 – Scoring Process**

The scoring process is thorough and rigorous.

All MCAS scorers must have content expertise and cannot be Massachusetts educators. Scorers are trained or instructed on the grade level question that they would score. That is, if a scorer is trained to score a specific grade 10 question, that does not mean that they can score **all** grade 10 questions.

Each question has a specific set of training materials, some of which you will see today. Scorers must qualify to score each question before they can score what are called 'live' student responses. To qualify, scorers must demonstrate that they understand the expectations at each

score point accurately and consistently. If scorers do not qualify to score a question, they cannot score any ‘live’ responses for that question.

To ensure continued accuracy during live scoring, all grade 10 student responses are scored by more than one scorer. Scorers are also continuously monitored using measures such as read behinds and embedded responses. A read behind is when a member of scoring leadership reads a response after a score has been submitted. Embedded responses are like field test questions. They are student responses that have already been scored that are embedded in the student responses that scorers are scoring. Scorers do not know which responses have previously been scored. If scorers fail to adhere to the standard and overall expectations that have been set, they are coached or retrained and given a second opportunity to score the same question. If they fail a second time, after being retrained, they are excused from scoring the question and all their previously scored responses are returned to the scoring pool to be scored again.

For live scoring, scorers are provided with the question.

- They review the sample response which includes possible responses that students might include.
- They review the scoring guide which articulates expectations at each score point.
- They review student responses for each score point, and
- They review scoring notes that were created during the Benchmarking process.

I will explain these components in the next few slides.

### **Slide 8 – Instructions to review Question 1: S-ID.B.5 (Released 2021)**

Let’s review the first constructed response question. This grade 10 question is aligned to the Statistics and Probability conceptual category and was released in 2021.

First, I will review the question, and then the sample response, the scoring guide, the scoring notes, and finally student work responses at each score point. After that, you will review and practice independently scoring some student responses for this question.

### **Slide 9 – Question**

This question is coded to standard S-ID.B.5. Questions aligned to this standard assess a student’s ability to read a two-way table and to identify, from the table, fractions or percentages that represent joint, marginal, and conditional relative frequencies. This question was assessed in Session 2, so the students were allowed to use a calculator.

A two-way frequency table is provided in the stem of the question. The table is filled in completely and contains all of the information students will need to answer the four parts of the question.

In Part A, we ask for a marginal relative frequency; what percentage of the vehicles are trucks? Students are asked to show their work or to explain their answer.

In Part B we ask for a conditional relative frequency; what ***fraction*** of the vans are blue? Notice we changed what we are looking for, so we boldfaced the word fraction. This is a typical practice in the development of questions, not just constructed response questions. Students are also asked here to show work or to explain their answer.

In Part C, we compound the relative frequency by asking for another fraction, this time the fraction of the total vehicles that are red **or** are vans. Again, students are asked to show work or to explain their answer.

In Part D, we compound it further, but instead of asking for a fraction or a percentage, we want to know the total number of red or green vans. And, once more, we want to know how they determined it.

### **Slide 10 – Sample Response**

For each constructed response question we develop, we create a Sample Response. This set of responses represents how we *think* a student might respond to the prompts. Very often they surprise us with their responses, which makes us very flexible at benchmarking. So, here, in Part A, the percentage we are looking for is 45%. They get this by dividing the last two numbers in the last column: 189 divided by 420, total trucks divided by total vehicles. That’s all we need for them to show that they have *some* ability to read a two-way table.

In part B, we want a fraction here; out of all the vans, how many are blue? That’s 127 over 231. A correct answer shows that they know that the denominator is different than the one from Part A, which further demonstrates their ability to read a two-way table.

In part C, the students need to demonstrate that the denominator is again the total 420 vehicles, but the numerator is tricky. A common mistake would be to add the reds and the vans for the numerator, forgetting to subtract the twice-counted red vans. Those who remember to do that will get this point. The answer we are looking for is 293 over 420.

Finally, in part D, since we are not asking for a percentage or a fraction, all the students need to do is to find the numerator. We’re looking for 104, and we expect to see them add  $51 + 53$  to get it. So, these are the answers we will be looking for as we score the students’ responses.

### **Slide 11 – Scoring Guide**

Each constructed response question includes a Scoring Guide. The scoring guides for each question differ from others in only a few places, as highlighted on this slide.

Most Scoring Guides have a second 4-point sentence, which is unique to the question. On this slide, the extra sentence is underlined in red. This sentence describes what the student who received four points on this question did to accumulate those points.

Each scoring guide also contains a statement that includes the standard, or parts of the standard that are assessed in the question. On this slide, the standard is underlined in green. You may note, there is another part to this standard which says, “Recognize possible associations and trends in

the data.” We did not assess that within the question, so we did not include that part of the standard in the sentence.

The conceptual category, circled in blue, appears in each score point. In this question, the conceptual category being assessed is Statistics and Probability.

You will also notice that the scoring guide categorizes the responses with the terms exemplary, good, fair, minimal, and “insufficient evidence of an understanding” to differentiate between the different scores a student may achieve.

## **Slide 12 – Scoring Notes**

At benchmarking, unique scoring notes are created by test developers from DESE and the contractor.

These notes include decisions that were made at the benchmarking meeting on the nuances of scoring each part of the question, based on what was observed in the many responses that were reviewed.

In Part A, we saw responses that included a correct fraction, but the student made an error when calculating the equivalent percentage. This resulted in an incorrect answer. However, in the student’s “work” they showed an ability to read the table. Since the standard is about reading a table and not about finding a decimal equivalent to a fraction, the decision was made to give such a response “answer only credit” which will be addressed later on in this slide.

In Part B, the decision was made to give full credit for a response that includes the correct fraction with no work or explanation. The fraction indicates that the student can read the table, so no further work was required, as no calculations were necessary. This contrasts with Part A, where showing the work, the fraction used to get the percentage, was helpful because that showed some understanding of the part. There is nothing more the student could do to demonstrate this in Part B, so just the correct answer receives full credit. We do, however, appreciate some attempt at an explanation. Also, we will accept the answer in the form of an equivalent percentage, as long as it is accompanied by some kind of work or explanation.

In Part C, we want a fraction. There is more here than just recording two numbers out of the table, so an answer only here does not receive full credit. At the 0/1 score line, when there is nothing else eligible for credit in the response, if a student answers with an accurate *percentage*, 69-70%, then credit of 1 point is given.

In Part D, if the student answers with a fraction, we’re okay with that for full credit as long as it includes some kind of work or explanation. At the 0/1 score line, credit is given for the response of 104/420.

Also addressed in the scoring notes are considerations for answer-only responses which are applicable in all parts.

### **Slide 13 – Score: 4**

This is an example of a 4 score. We will review parts C and D on the next slide.

In part A, we see 45% and how it was determined.

In Part B, the correct fraction with the explanation provided is sufficient for full credit.

### **Slide 14 – Score: 4 Continued**

The answers and work provided in parts C and D are sufficient for full credit.

This response earns a score of 4, for all parts correct.

### **Slide 15 – Score: 3**

This is an example of a 3 score. We will review parts C and D on the next slide.

Part A shows both a correct answer and explanation for full credit.

In part B, although students can receive full credit for the fraction only, scorers are still trained to read the student's explanation, if given.

### **Slide 16 – Score: 3 Continued**

In part C, you will notice a typical error where the student did not subtract the intersection.

In part D, according to the Scoring Notes, it's okay to submit a fraction as an answer, and as we read along, we are able to follow the student's thought process.

This response earns a score of 3 for parts A, B and D.

### **Slide 17 – Score: 2**

This is an example of a 2 score. We will review parts C and D on the next slide.

In Part A, you will notice the incorrect spelling of the word, "percent". As mentioned earlier, no credit is deducted for incorrect spelling. Also, in part A, you will notice that the response states that "180 divided by 420 equals .45" This error is noted as a transcription error since it's very easy to type a 0 on your keyboard when typing a 9. Transcription errors are ignored. Since students have the use of a calculator, they would have found that  $180/420$  is equal to 42.8%. If the response noted 42.8% as the answer, this part would have received no credit.

In Part B, the student describes their fraction in words, which is acceptable for full credit.

### **Slide 18 – Score: 2 Continued**

In Part C, the student answered the same question as in Part B, but for vans, so there is no credit for the description of an incorrect fraction.

In Part D, it appears as though the student has added all the red and green vehicles.

So, credit in A and B, and no credit in C and D, earns a total of 2 points for this response.

### **Slide 19 – Score: 1**

This is an example of a 1 score. We will review parts C and D on the next slide. The percentages in both parts A and B are incorrect.

### **Slide 20 – Score: 1 Continued**

Part C includes another incorrect percentage. However, Part D has an answer only which received one point per the scoring notes. This is a clear example of a student persevering through a constructed response question to receive credit in part D only.

This response demonstrates a minimal understanding of this learning standard and earned a score of 1 point.

### **Slide 21 – Score: 0**

This is an example of a 0 score. We will review parts C and D on the next slide.

In Part A, this student states a fact; the percentage is below 50%. The student justifies this by comparing the numbers 189 and 231. So, yes, 189 is less than 231, so the percentage is less than 50% for trucks because there are fewer of them. This shows the ability to compare the values of numbers, but **not** the ability to calculate a percentage from a table. Therefore, this response receives no credit for Part A.

Nor is there any credit in Part B, because the answer is not  $\frac{3}{4}$ .

### **Slide 22 – Score: 0 Continued**

In parts C and D, the student provides incorrect fractions.

So, with no credit in Parts A, B, C, or D, this response earns a score of 0.

### **Slide 23 – Instructions for Individual Practice**

Now that you have been trained on how to score this question, please gather the question, the sample response, the scoring guide, and the scoring notes. These resources are essential when scoring responses. Scorers have these readily available and refer to them as they score each response. Analyze the training responses that were just reviewed, and then independently practice scoring the five practice responses that are included on pages 13 through 17 in your packet. As you read each response, choose the score that best represents the response. You will follow this process for each of the practice responses.

You may pause the presentation and score responses A through E. When you have read and scored each response, you may resume the presentation for the scoring of each response.

### **Slide 24 – Practice Response A**

Thank you for taking the time to score each of the student responses. Here is response A which is on page 13 of the training packet. This response received a score of 2.

There is no credit in Part A.

Part B has a fraction that's close to the correct answer. However, the numbers in the denominator are transposed. Looking at the explanation, we see that the student wrote that the total number of vans is 321. Recall that the total number of vans, 231 was provided in the table. This is recorded as a transcription error and ignored. The explanation further reinforces our decision as it includes a description of the source of the numbers in the fraction. This is a case where including the explanation helps the student, who otherwise would have received no credit with an answer only of  $127/321$ .

There is no credit in Part C.

Part D has the correct answer with an acceptable explanation.

This response earns 2 points for correct answers in parts B and D.

### **Slide 25 – Practice Response B**

Here is response B which is on page 14 of the training packet. This response received a score of 4.

Part A shows the fraction properly converted to the correct percentage.

Part B has the correct fraction, an answer only, for full credit.

Part C receives full credit for a correct answer and some work.

Part D also receives full credit. This student takes the answer in Part D two steps further by giving us a fraction as well as the correct percentage, though neither were requested.

This response earns 4 points for correct answers in all parts.

### **Slide 26 – Practice Response C**

Here is response C which is on page 15 of the training packet. This response received a score of 1.

The only part that received credit on this response is Part C. In part C, as the Scoring Notes indicated, credit would be given for an answer of 69-70% at the 0/1 line.

This response earns 1 point for part C.

### **Slide 27 – Practice Response D**

Here is response D which is on page 16 of the training packet.

A quick scan tells us that there is no understanding of the standard demonstrated in this response.

This response earns 0 points.

### **Slide 28 – Practice Response E**

Here is response E which is on page 17 of the training packet. This response received a score of 3.

In Part A, the student has the correct percentage and explanation.

Part B also gives a percentage with the correct explanation, so according to the Scoring Notes, Part B gets full credit.

Part C receives full credit for a correct fraction and explanation.

Part D is not correct and has nothing in the explanation that indicates that the student knows how to find the answer.

So, this response earns a total of 3 points for parts A, B, and C.

### **Slide 29 – Instructions to review Question 2: N-Q.A.1 (Released 2023)**

Similar to what I did with the first question, I will now review a second constructed response question. This grade 10 question is aligned to the Number and Quantity conceptual category and was released in 2023.

Again, I will review the question, along with the sample response, the scoring guide, the scoring notes, and student work responses at each score point. Then you will review and practice independently scoring some student responses for this question.

### **Slide 30 – Question**

This question is coded to N-Q.A.1. Questions aligned to this standard assess a student's ability to manipulate units and employ dimensional analysis. This question was also assessed in Session 2, and so, again, students were able to use a calculator.

In this question, the student is told that Ellis runs around a track at a constant speed. We give the length of the track and the time it takes Ellis to run that distance. This information may be used throughout the question.

In Part A we ask for the amount of time it takes Ellis to run a mile, based on the information we gave them in the stem. Students are asked to show work or explain their answer.

In Part B we ask the students to calculate the number of feet Ellis runs in 1 minute by doing some simple unit manipulation. The students have access to the reference sheet which gives them the number of feet in a mile. We expect that they will use that to get their answer and then show us how they got it.

In Part C we ask them to determine the speed Ellis runs around the track, in miles per hour. Students are again asked to show work or to explain their answer.

Part D describes Ellis' goal of running a total of 15 miles in 5 days, while running for 40 minutes each day. Students are asked to determine whether the goal can be achieved, and are once more asked to show work or to explain their answer.

### **Slide 31 – Sample Response**

Here is the Sample Response created for this question.

In Part A, students are expected to simply multiply the time to run  $\frac{1}{4}$  mile by 4 to determine the time to run 1 full mile. They can convert to seconds if they want, but they don't have to. They just need to show that  $3.2 \times 4 = 12.8$ . Since there are computations involved, we want to see what they did.

In Part B, students need to give us a rate. They can convert miles to feet and divide by the number of minutes, OR they can divide the 5,280 feet in a mile by 12.8.

In Part C students need to do some dimensional analysis and convert their rate to miles per hour. There are several ways to accomplish this, the simplest being to divide 60 by 12.8. Students can round or truncate their answer but must include work or explanation for full credit.

In Part D, because the question being asked is dichotomous, we need an answer of Yes, followed by work or explanation. We expect the students to determine the number of laps Ellis runs per day, translate that into 5 days, and then divide by 4 because the lap is  $\frac{1}{4}$  mile. This number proves to be greater than 15, so Ellis will meet the goal.

### **Slide 32 – Scoring Guide**

Similar to the previous scoring guide, the extra sentence for this question is underlined in red, the standard is underlined in green, and the conceptual category, in this case Number and Quantity, is circled in blue.

### **Slide 33 – Scoring Notes**

Here are Scoring Notes that were compiled for this question at benchmarking.

In Part A, we allow rounding or truncating for full credit as long as there is some work or explanation shown. If there is no work or explanation, answers of 12 or 13 are not accepted and receive no credit.

In Part B, truncating to 412 is acceptable with appropriate work. There were many responses where the student determined the number of feet in  $\frac{1}{4}$  mile, a possible part of the calculations, but not the total distance Ellis runs in one minute. These responses did not receive credit.

In Part C, we accepted answers of 4.6 or 4.7 without work for answer-only credit. We did not accept answer-only responses of either 4 or 5. Responses of 4 or 5, however, were given full credit if they were accompanied by work that led to the rounding or the truncation.

As I mentioned earlier, part D must include the answer yes and an explanation to receive credit. While many students found that Ellis would run 15.625 miles (or more than 15 miles), many other students determined that that distance could be run in fewer than 200 minutes (exactly 192 minutes) which also was a correct answer.

Answer-only credit opportunities were only possible in parts A, B and C.

Notice that some conversions were included in the scoring notes for the scorers.

### **Slide 34 – Score: 4**

This is an example of a 4 score. Part A includes the correct answer of 12.8 and work, for full credit.

In Part B, the answer is truncated, but the student included the correct division for full credit, according to the scoring notes.

In Part C, the student also truncated the answer, but again they included the correct work for full credit.

Part D has an answer of yes with the calculations. And while this student didn't tell us that 15.625 is the number of miles Ellis will run, scorers can see the minutes in 5 days, which is divided by minutes per mile, which gives miles. This is accepted as correct work.

This response earns a 4 score for all parts.

### **Slide 35 – Score: 3**

This is an example of a 3 score. This response has no work in parts A, B, and C, just answers only, embedded in full sentences. So, according to the Scoring Notes, these three parts are worth a total of 2 points.

In part D, while the student didn't show the calculations, they must have done them because they tell us how many miles Ellis will run. This part gets full credit.

This response earns a score of 3 for answer-only in parts A, B, and C, and then full credit in part D.

### **Slide 36 – Score: 2**

This is an example of a 2 score. In Part A, the answer is correct, and this student attempted to show how they arrived at their answer. In doing so, they transcribed the number from the prompt incorrectly. This is forgiven since the answer is correct and would have been explained correctly if the number was 3.2 instead of 3.4, which when multiplied by 4 does not equal 12.8. So, this part gets one point.

Part B also gets full credit for a correct answer with correct calculations.

Part C is incorrect, and although Part D says “Yes” it shows the work of multiplying their answer in Part A by 5, so the units would be minutes, not miles, and not correct.

This response earns 2 points for credit in parts A and B.

### **Slide 37 – Score: 1**

This is an example of a 1 score. This response has a bunch of answers only, one of which, in Part A, is correct. According to the Scoring Notes one answer only gets 1 point. The answer in Part D has no accompanying explanation and gets no credit.

This response earns a 1 score for Part A.

### **Slide 38 – Score: 0**

This response earns a 0 score. In Part A this student repeats a number from the stem, and thus receives no credit.

In Part B, the answer is close, but since we have no idea as to how it was derived it gets no credit.

Similarly, we don't know how the student got this answer in Part C. According to the Scoring Notes, an answer of 5 with no support gets no credit.

There is also no credit in Part D, for a total of 0 points.

### **Slide 39 – Instructions for Individual Practice**

Once more, having been trained on how to score the second question, please gather the question, the sample response, the scoring guide, and the scoring notes. These resources are essential when scoring responses. Scorers have these readily available and refer to them as they score each response. Analyze the training responses that were just reviewed, and then independently practice scoring the five practice responses that are included on pages 29 through 33 in your packet. As you read each response, choose the score that best represents the response. You will follow this process for each response.

You may pause the presentation and score responses A through E. When you have read and scored each response, you may resume the presentation for the scoring of the question.

### **Slide 40 – Practice Response A**

Thank you again for taking the time to score each of the student responses. Here is response A which is on page 29 of the training packet. This response received a score of 2.

There is a correct answer in Part A.

Part B has one of those responses that shows us the number of feet in  $\frac{1}{4}$  mile, so that gets no credit.

Part C shows the correct computation, with a truncated answer, and according to the Scoring Notes gets full credit.

Part D tells us nothing more than just yes, so, this response earns a score of 2 for Part A and Part C.

### **Slide 41 – Practice Response B**

Here is response B which is on page 30 of the training packet. This response received a score of 4.

Parts A, B, and C include correct answers and calculations with no errors, each worth 1 point.

In Part D, the student informs us that Ellis meets the goal without using the entire 200 minutes, and that is acceptable.

This response earns a 4 score for full credit in all parts.

### **Slide 42 – Practice Response C**

Here is response C which is on page 31 of the training packet. This response received a score of 1.

In Part A, the student tells us exactly how they got their answer and rounds the answer up. This is an example of how including an explanation can help a student.

Part B is, again, close, but no credit with an insufficient explanation.

Part C uses the numbers provided in the stem, and in Part D, while it is correct to say yes, the student did not provide a viable explanation.

This response earns a 1 score for credit in Part A.

### **Slide 43 – Practice Response D**

Here is response D which is on page 32 of the training packet. This response received a score of 0.

In Part A the student just repeats information provided in the stem of the question.

There is no credit in Part B and in Part C, although the answer is close, there is no explanation to support the answer so no credit there either.

In Part D, while the student says, “Yes”, it is for a non-mathematical reason.

This response earns a 0 score for no credit in any part.

### **Slide 44 – Practice Response E**

Here is response E which is on page 33 of the training packet. This response received a score of 3.

Part A receives full credit. Note that there are no units, but that is okay.

Part B is not correct.

On the other hand, Part C is correct with acceptable rounding at the end.

In Part D, the student calculates that running three miles takes 38.4 minutes, which is less than 40 minutes, and therefore Ellis would run more than 15 miles. This works, so this part gets full credit.

This last response earns a 3 score for full credit in parts A, C and D.

### **Slide 45 – Resources on the Website**

The following are links to resources that would be helpful as you prepare your students for test administration.

- For all MCAS headlines and/or additional information such as MCAS administration dates, accommodated forms and the calculator policy for grade 10, please use the link listed for *MCAS headlines and links to MCAS site*.
- The Mathematics Test design provides information on the number of questions, the types of questions, and the percentages of reporting categories that can be found on each math test. Use the *Mathematics Test Designs* link to access the test designs for all grade levels.
- The list of standards that can be assessed on grade 10 tests and retests can be found via the third link in this table.
- Each year, samples of student responses for each of the released constructed response questions are posted on the website. Use the *Student Work Sample* link to access sample student work for released constructed response questions.
- All of the questions assessed on the grade 10 test are released. Use the *Released Questions* link for access to the released questions.
- In addition to the released questions, there are practice test questions for each grade level. These practice tests include examples of each question type in the testing platform that students may encounter during testing, and a session just like the administered test where a calculator can be used. Students can also access an online tutorial to learn how to navigate the online system. Use the link listed to access both the *Practice Tests and the Tutorial*.

#### **Slide 46 – Contact Information**

For policy questions, test design questions and/or accommodation questions or concerns before, during, or after test administration, please email us at [mcas@mass.gov](mailto:mcas@mass.gov) or call us at 781-338-3625.

Also, during test administration, you can contact the MCAS Service Center with questions at 1-800-737-5103.

#### **Slide 47 – Thank You**

I appreciate you taking the time to listen to our presentation on the Scoring of grade 10 MCAS Constructed Response Questions. I hope your students are successful in the upcoming MCAS Mathematics administration.