Practice Test

Mathematics

GRADE 10

Student Name

School Name

District Name

MASSACHUSETTS DEPARTMENT OF
ELEMENTARY AND SECONDARY
EDUCATION

This is a practice test. Your responses to practice test questions must be recorded on your Practice Test Answer Document.

Mark only one answer for each multiple-choice question. If you are not sure of the answer, choose the answer you think is best.

HOW TO ANSWER OPEN-RESPONSE QUESTIONS

- Read all parts of each question carefully.
- Make each response as clear, complete, and accurate as you can.
- Check your answers.

Mathematics

DIRECTIONS

This practice test contains one multiple-choice question, one short-answer question, and one open-response question. Mark your answers to these questions in the spaces provided on pages 4 and 5 of your Practice Test Answer Document.

1 Which of the following is equivalent to the expression below?

$$(5x + 6y - 3z) + (3x - 8y + z)$$

A. $8x - 14y - 4z$

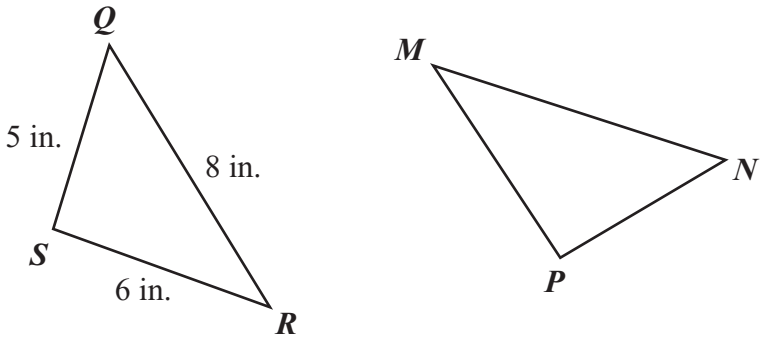
B. $8x - 2y - 2z$

C. $8x - 14y - 2z$

D. $8x - 2y - 3z$

Question 2 is a short-answer question. Write your answer to this question in the box provided on page 4 of your Practice Test Answer Document. Do not write your answer on any other page. You may do your figuring on any other page.

2 In the diagram below, $\triangle QRS \cong \triangle NMP$.



What is the length, in inches, of $\overline{MP}$?

Question 3 is an open-response question.

- **BE SURE TO ANSWER AND LABEL ALL PARTS OF THE QUESTION.**
- **Show all your work (diagrams, tables, or computations) in your Practice Test Answer Document.**
- **If you do the work in your head, explain in writing how you did the work.**

Write your answer to question 3 in the space provided on page 5 of your Practice Test Answer Document.

3 Jason launched a model rocket from the ground. The formula below can be used to determine the height of the rocket above the ground at any time during the rocket's flight.

$$h = 16t(7 - t)$$

In the formula, h and t are defined as follows:

- t = the time, in seconds, that has elapsed since the rocket was launched
- h = the height, in feet, of the rocket above the ground at time t

Use the formula to answer the following questions.

a. What was the height, in feet, of the rocket 1 second after it was launched? Show your work.

b. What was the height, in feet, of the rocket 6 seconds after it was launched? Show your work.

c. The value of h was 0 when the rocket hit the ground. How many seconds after the rocket was launched did it hit the ground? Show your work.

d. How many seconds after the rocket was launched was the height of the rocket 160 feet? Show your work.

MASSACHUSETTS COMPREHENSIVE ASSESSMENT SYSTEM

Grade 10 Mathematics

Practice Test Answer Document

School Name:_____ District Name:_____ Last Name of Student: _____ First Name of Student:_____	**Marking Instructions** • Use a No. 2 pencil only. • Do not use ink, ballpoint, or felt tip pens. • Make solid marks that fill the circles completely. • Erase cleanly any marks you wish to change. • Make no stray marks on this form. • Do not fold, tear, or mutilate this form.

1. Ⓐ Ⓑ Ⓒ Ⓓ

2.

DO NOT WRITE
IN SHADED AREA

Please go to the next page to answer the next question for this test.

3.

STOP!