eMPower™ **ME**

STUDENT
SAMPLE ITEM BOOKLET
Mathematics
Grade 8

MEA
Maine Educational Assessment
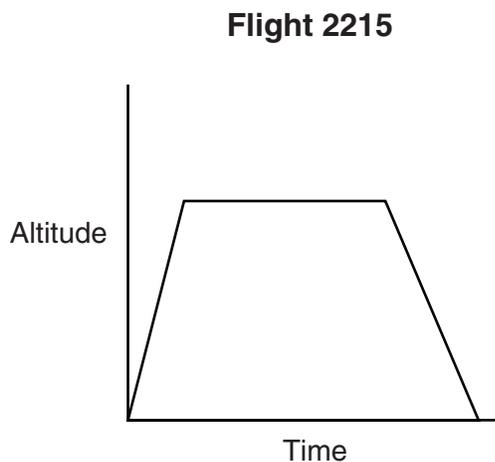
measured
progress®

Sample Items

Directions
Read each question and choose the best answer.

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1. A student collected 50 ants. The average mass of one ant was 7.2×10^{-2} grams. What was the total mass of the 50 ants?

   A 0.36 g

   B 3.6 g

   C 36 g

   D 360 g

2. Jeni is studying the graph shown, which models the flight of the plane for Flight 2215.

Flight 2215

Which statement most accurately describes what is shown in the graph?

   A The speed of the plane is constant throughout the entire flight.

   B The altitude of the plane is constant throughout the entire flight.

   C The speed of the plane increases during takeoff, is constant for much of the flight, and decreases during landing.

   D The altitude of the plane increases during takeoff, is constant for much of the flight, and decreases during landing.

3. Look at this number line.
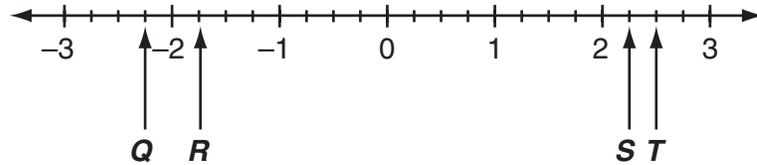
Which point **best** represents the location of $-\sqrt{5}$ on the number line?

A point Q

B point R

C point S

D point T

4. Nick asked 266 students about which town parks they visit. He then created the following two-way table.

Park Visitation Survey

		Oakwood Park?	
		Yes	No
Sullivan Park?	Yes	201	41
	No	4	?

a. How many students visited neither Oakwood Park nor Sullivan Park?

b. Compute the relative frequency of students who visit Oakwood Park among those who visit Sullivan Park. Round the relative frequency to the nearest whole percent.

c. Compute the relative frequency of students who visit Oakwood Park among those who do not visit Sullivan Park. Round the relative frequency to the nearest whole percent.

d. Are students who visit Sullivan Park more likely to visit Oakwood Park than those who do not visit Sullivan Park? Use your results from parts (b) and (c) to explain how you know.

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Use the information below to answer questions 5 and 6.

Fred and Owen both found coins in their desks. This table shows some of the results of their findings.

Number of Coins Found

	Pennies	Nickels	Dimes	Quarters
Fred	3	4	2	5
Owen	2	1		6

5. Which piece of information is **not** sufficient to complete the table?

A the total value of the coins in Fred's desk

B the total value of the coins in Owen's desk

C the total number of coins in both students' desks

D the total value of the coins in both students' desks

6. The total value of Owen's coins is $2.07. Owen claims this expression represents the fraction of the coins in his desk that have a value greater than $0.05.

$$\frac{5+6}{1+2}$$

Is Owen's claim true?

A Yes, his claim is true.

B No, he should add 11 to the denominator.

C No, he should add 1 to the numerator and 5 to the denominator.

D No, he should add 3 to the numerator and 6 to the denominator.

STOP