

Let's Practice!

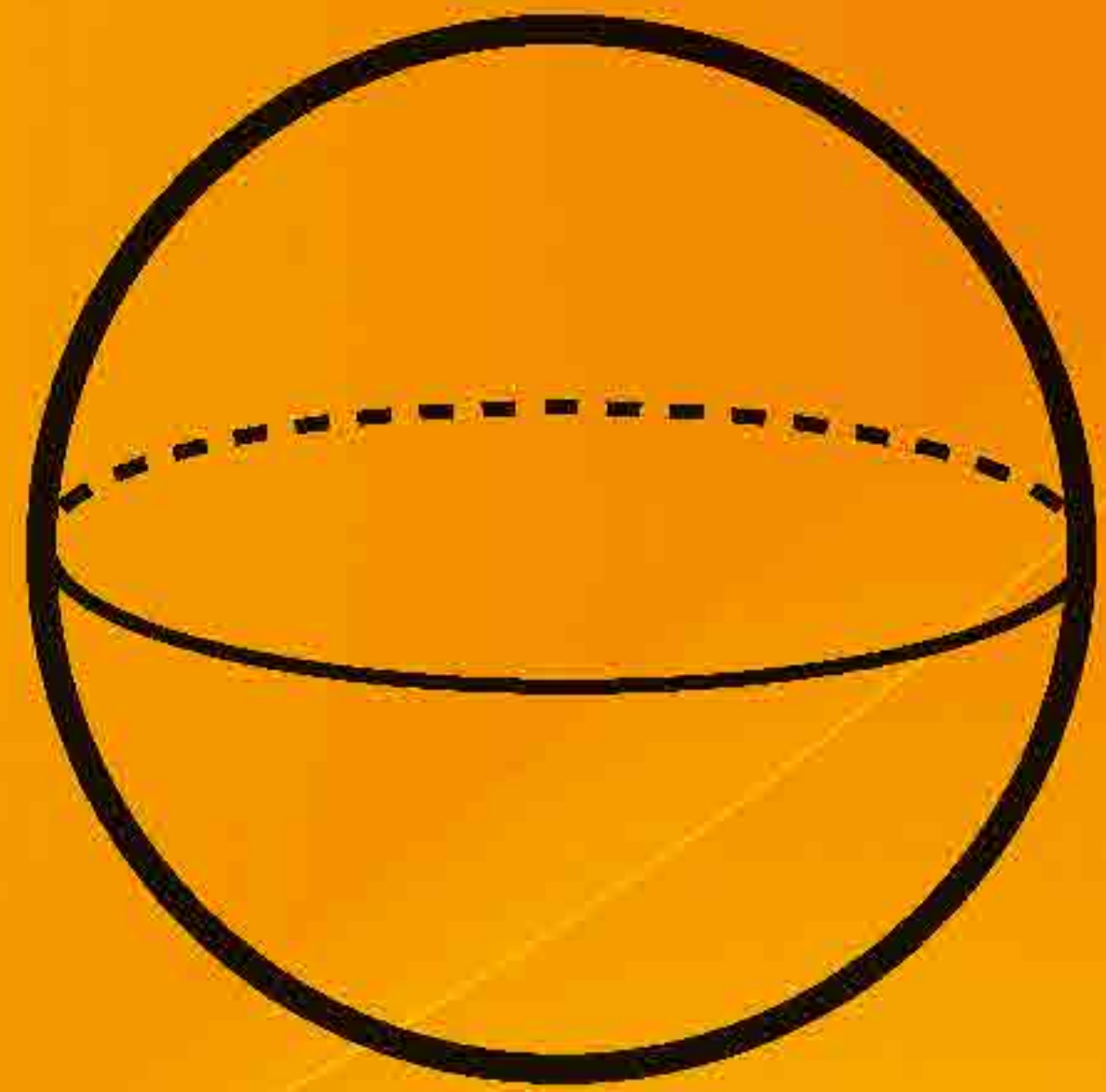
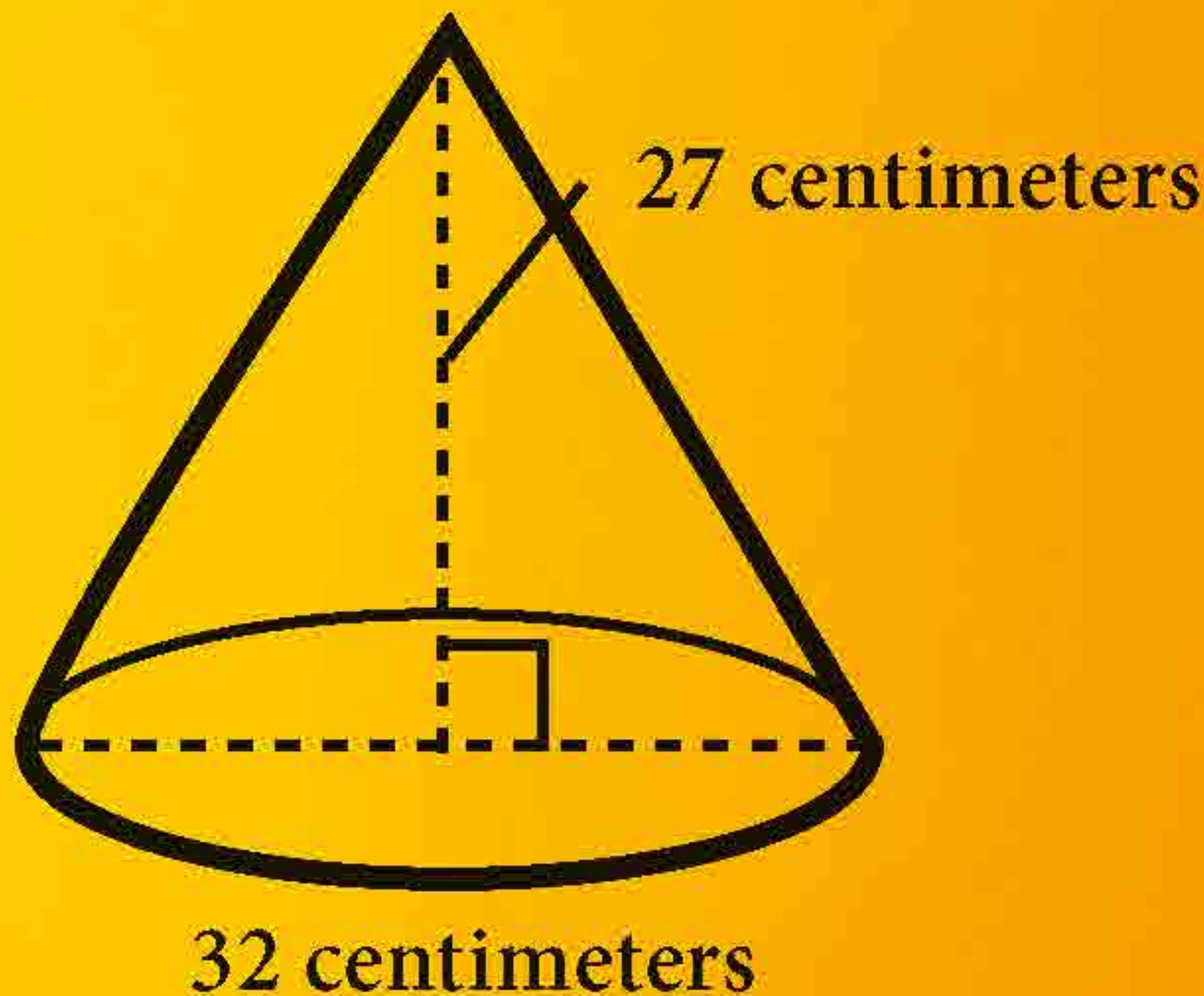
SMARTER Math Review: Constructed Response Question

8TH GRADE

Common Core State Standard 8.G.9 – Geometry

Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.

The cone and sphere have equal volumes.



(not drawn to scale)

What is the radius of the sphere?

centimeters

SBAC Sample Item ID: MAT.08.CR.2.0000G.B.132

DOK Level: 2

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Let's
Practice!

SMARTER Math Review: Extended Response Question

8TH GRADE

Common Core State Standard 8.EE.7 — Expressions and Equations

Solve linear equations in one variable.

Consider the equation

$$3(2x + 5) = ax + b$$

Part A

Find one value for a and one value for b so that there is exactly one value of x that makes the equation true.

$$a = \boxed{}$$

$$b = \boxed{}$$

Explain your reasoning.

Part B

Find one value for a and one value for b so that there are infinitely many values of x that make the equation true.

$$a = \boxed{}$$

$$b = \boxed{}$$

Explain your reasoning.

SBAC Sample Item ID: MAT.08.ER.3.000EE.D.137

DOK Level: 2

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An excerpt
from a

SMARTER Math Review: Performance Task Question

8TH GRADE



Today you are going to do some research about the cost of owning a pet. You will create a list of items that you will need for your pet and the cost of each item. You will need this list and associated costs in order to complete the upcoming performance task.

First, choose the type of pet that you [by partner or group] would like to research. The choices are a dog, a cat, a hamster, or a parakeet.

Create a list of items you will need for your pet and the prices of the items. Use the Web to find this information.

Cost of Owning and Caring for a Pet

Estimate the cost of adopting and maintaining a pet (dog, cat, hamster, or parakeet) for one year.

Provide a thorough explanation below that proves you have thought of all the costs associated with owning your choice of pet. Be sure to account for all one-time costs, as well as recurring costs and the frequency of those costs. Adjust your total above if needed.

See your math teacher for more about this problem...

SBAC Sample Item ID: MAT.08.PT.4.MYPET.A.415

DOK Level: 4 (for entire task)

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Let's
Practice!

SMARTER Math Review: Selected Response Question

8TH GRADE

Common Core State Standard 8.EE.1 — Expressions and Equations

Know and apply the properties of integer exponents to generate equivalent numerical expressions.

Select all of the expressions that have a value between 0 and 1.

(A) $8^7 \cdot 8^{-12}$

(B) $\frac{7^4}{7^{-3}}$

(C) $\left(\frac{1}{3}\right)^2 \cdot \left(\frac{1}{3}\right)^9$

(D) $\frac{(-5)^6}{(-5)^{10}}$

SBAC Sample Item ID: MAT.08.SR.1.000EE.B.203

DOK Level: 1

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Let's Practice!

SMARTER Math Review: Technology Enhanced Question

8TH GRADE

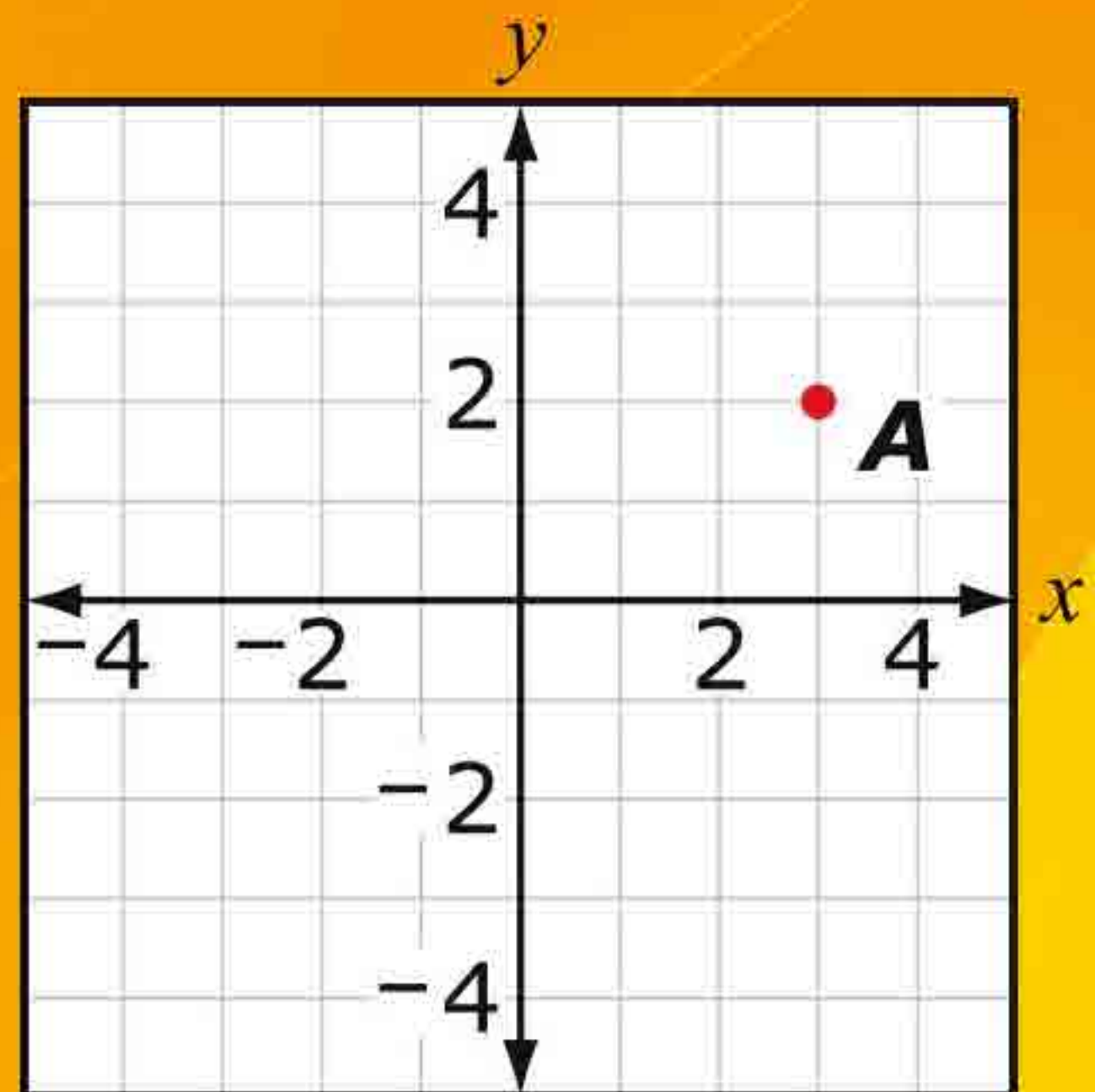
Common Core State Standard 8.F.1 – Functions

Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.

Point A is plotted on the xy -coordinate plane below. You must determine the location of point C given the following criteria:

- Point C has integer coordinates.
- The graph of line \overleftrightarrow{AC} is not a function.

Click on the xy -coordinate plane to place a point that could represent point C .



SBAC Sample Item ID: MAT.08.TE.1.0000F.E.140

DOK Level: 1

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