DO NOW

ALGEBRA 2 · 5 MINUTES · START RIGHT AWAY

Lesson 9-1d **Use a Parabola to Model a Real-World Situation**

Name _____ Date _____ Per _____

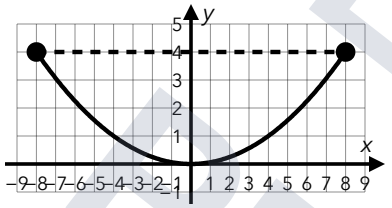
1 FLUENCY

A satellite dish's cross section is $y = \frac{1}{24}x^2$ (inches). How far from the vertex should the receiver (focus) be?

$4c =$ ☐ $c =$ ☐ in. above the vertex

2 VISUAL MODEL

A dish is 16 in. wide and 4 in. deep, with its vertex at the origin. The rim point (8, 4) is on the parabola.



$x^2 = 4cy$

$64 =$ ☐c

focus $(0,$ ☐$)$

3 APPLICATION

A flashlight reflector is a parabola 6 in. wide and 2 in. deep. How far from the vertex should the bulb be placed?

☐ in. $(= \frac{\square}{\square}$ in.$)$

WORK

4 REASONING

Without calculating: Dish A is 20 ft wide and 4 ft deep. Dish B is 20 ft wide and 5 ft deep. Which focus is farther from its vertex? Explain.

Dish A or **Dish B**

_____

_____

*We don't divide our effort, we **multiply** it!*

✎ Show your work ✓ Check your work ★ Try your best

Preview - the full worksheet and its answer key are at primeworksheet.com