

Chapter 8

Performance Task (continued)

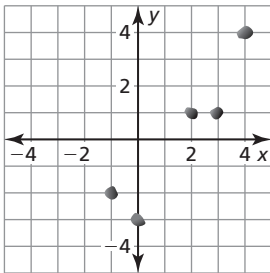
Asteroid Aim

Apps take a long time to design and program. One app in development is a game in which players shoot lasers at asteroids. They score points based on the number of hits per shot. The designer wants your feedback. Do you think students will like the game and want to play it? What changes would improve it?

- The game starts with a grid and a random set of targets as you see below. You get five points per asteroid hit and two shots. Play the game a few times and record your score. Write your equations and then sketch them on the graph. Record the points you get each round. The app would say you hit the asteroid if you were within 0.3 units of the center.

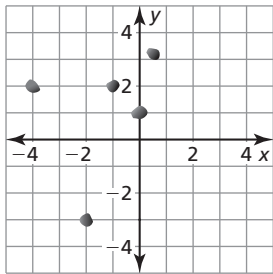
a.

Shot	Equation	Points
1		
2		



b.

Shot	Equation	Points
1		
2		

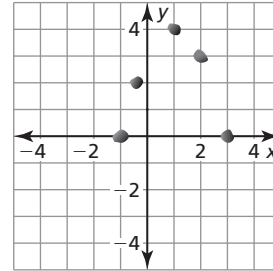


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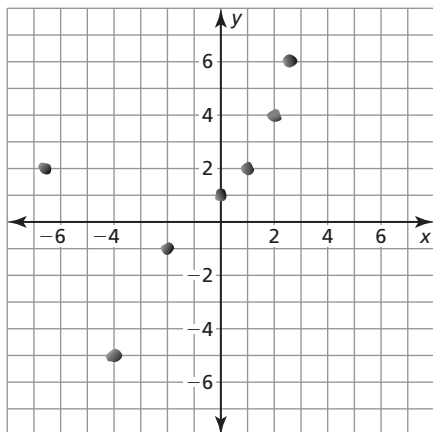
Asteroid Aim

c.

Shot	Equation	Points
1		
2		



- What if the rules were to change? What if you earned more points for each hit on one equation: 5 points for 1 hit, 20 points for 2 hits, 45 points for 3 hits, and 80 points if you hit 4 asteroids. Look back at Exercise 1. Would you change your equations? Select one of the three problems and write one equation to get as many points as you can.
- How would you change the game? What method do you think would be the best? Should there be more points awarded for quadratic equations? What about exponential equations? Write your own rules for your app and then use the grid to get as many points as you can.



Name _____ Date _____

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Teacher Notes: