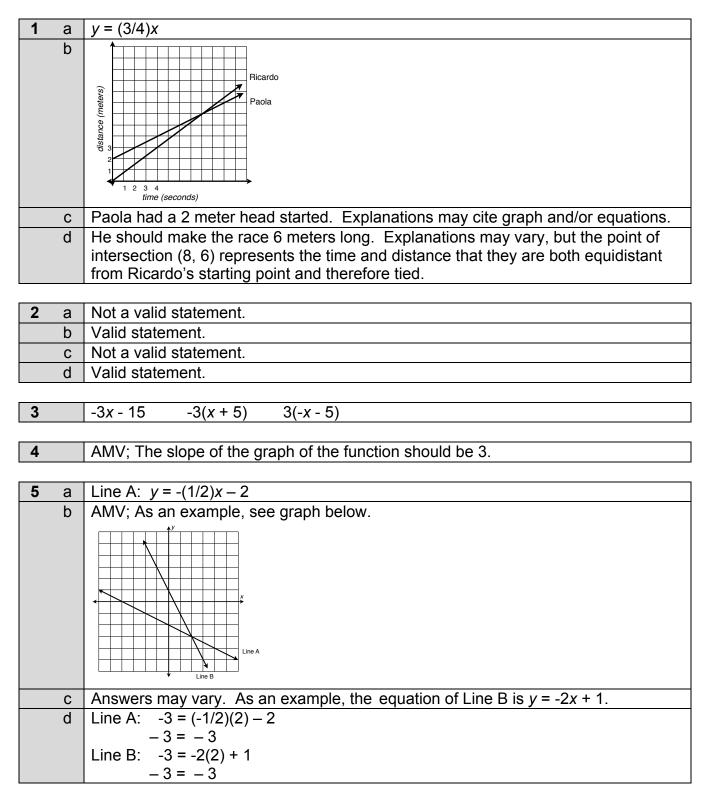
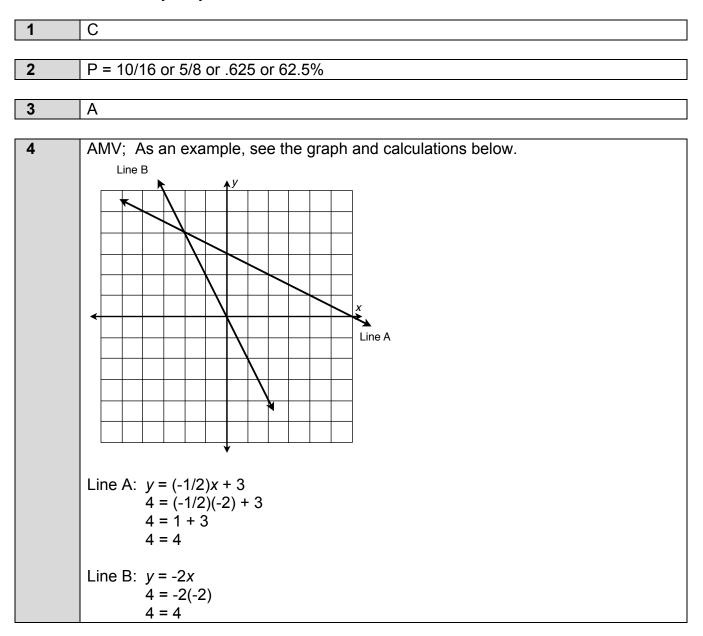
## **PROFICIENCY CHALLENGE 9 ANSWER KEY**



## **PROFICIENCY CHALLENGE 10 ANSWER KEY**



## **PROFICIENCY CHALLENGE 11 ANSWER KEY**

1	а	11				
	b	2 x 10 <sup>-2</sup>				
	С	8 x 10 <sup>8</sup>				
	d	7 x 10 <sup>5</sup>				
2		3 x 10 <sup>4</sup> or 30,000				
3		4.2 • 10 <sup>19</sup>				
Ŭ		AMV; As an example: $(6 \cdot 10^{10})(7 \cdot 10^8)$				
4	а	Tatiana is more accurate.				
	b	AMV; Students may refer to the linear interpolation method to make rational				
		number approximations.				
5		AMV; As an example: $2^4 \cdot 2^2$				
6		AMV; As an example: $\frac{x^5}{x^9}$ or $(x^{-1})(x^{-3})$				
		ANNV, AS all example. $\frac{1}{x^9}$ of $(x^2)(x^2)$				
7		AMV; As an example: (-3) <sup>-2</sup>				
8	а	6 <sup>2</sup>				
	b	$x^{-3}$ or $1/(x^{3})$				
	С	$x^{-1}$ or $1/x$				

## **PROFICIENCY CHALLENGE 12 ANSWER KEY**

1	$x = 35^{\circ}$ $y = 35^{\circ}$					
2	AMV; Check student sketch for accuracy. Sides should be 9-12-15 units.					
3	x = 18cm					
4	Yes. The diagonal of the cube is about 13.8in. A common mistake students may					
	make is only finding the diagonal of the face (only about 11.3in). Students need the					
	use this information to find the diagonal of the cube.					

5				
		Bike	No Bike	Total
	Skateboard	2	2	4
	No Skateboard	10	6	16
	Total	12	8	20

6	AMV; The purpose of this problem is to have students think about using tools strategically. They do not need to do each task. As examples:						
	a. a ruler						
	b. a coordinate plane on graph paper						
	c. mental math						
	d. a calculator						
	e. an ordered list or table of values						