## Unit 6 Lesson 7 Cumulative Practice Problems

1. The equation and the tables represent two different functions. Use the equation $b=4a−5$ and the table to answer the questions. This table represents $c$ as a function of $a$.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| * $a$
 | * -3
 | * 0
 | * 2
 | * 5
 | * 10
 | * 12
 |
| * $c$
 | * -20
 | * 7
 | * 3
 | * 21
 | * 19
 | * 45
 |

* 1. When $a$ is -3, is $b$ or $c$ greater?
	2. When $c$ is 21, what is the value of $a$? What is the value of $b$ that goes with this value of $a$?
	3. When $a$ is 6, is $b$ or $c$ greater?
	4. For what values of $a$ do we know that $c$ is greater than $b$?
1. Elena and Lin are training for a race. Elena runs her mile at a constant speed of 7.5 miles per hour.
* Lin’s total distances are recorded every minute:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| * time (minutes)
 | * 1
 | * 2
 | * 3
 | * 4
 | * 5
 | * 6
 | * 7
 | * 8
 | * 9
 |
| * distance (miles)
 | * 0.11
 | * 0.21
 | * 0.32
 | * 0.41
 | * 0.53
 | * 0.62
 | * 0.73
 | * 0.85
 | * 1
 |

* 1. Who finished their mile first?
	2. This is a graph of Lin’s progress. Draw a graph to represent Elena’s mile on the same axes.
	+ 
	1. For these models, is distance a function of time? Is time a function of distance? Explain how you know.
1. Match each function rule with the value that could not be a possible input for that function.
	1. 3 divided by the input
	2. Add 4 to the input, then divide this value into 3
	3. Subtract 3 from the input, then divide this value into 1
	4. 3
	5. 4
	6. -4
	7. 0
	8. 1
* (From Unit 6, Lesson 2.)
1. Find a value of $x$ that makes the equation true. Explain your reasoning, and check that your answer is correct.
* $-(-2x+1)=9−14x$
* (From Unit 4, Lesson 13.)



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