### Lesson 4 Practice Problems

1. Decide whether each table could represent a proportional relationship. If the relationship could be proportional, what would the constant of proportionality be?
   1. How loud a sound is depending on how far away you are.

|  |  |
| --- | --- |
| * + distance to listener (ft) | * + sound level (dB) |
| * + 5 | * + 85 |
| * + 10 | * + 79 |
| * + 20 | * + 73 |
| * + 40 | * + 67 |

* 1. The cost of fountain drinks at Hot Dog Hut.

|  |  |
| --- | --- |
| * + volume (fluid ounces) | * + cost ($) |
| * + 16 | * + $1.49 |
| * + 20 | * + $1.59 |
| * + 30 | * + $1.89 |

1. A taxi service charges $1.00 for the first mile then $0.10 for each additional mile after that.

* Fill in the table with the missing information then determine if this relationship between distance traveled and price of the trip is a proportional relationship.

|  |  |
| --- | --- |
| * distance traveled (mi) | * price (dollars) |
|  |  |
| * 2 |  |
|  |  |
| * 10 |  |



1. A rabbit and turtle are in a race. Is the relationship between distance traveled and time proportional for either one? If so, write an equation that represents the relationship.

* Turtle’s run:

|  |  |
| --- | --- |
| * distance (meters) | * time (minutes) |
| * 108 | * 2 |
| * 405 | * 7.5 |
| * 540 | * 10 |
| * 1,768.5 | * 32.75 |

* Rabbit’s run:

|  |  |
| --- | --- |
| * distance (meters) | * time (minutes) |
| * 800 | * 1 |
| * 900 | * 5 |
| * 1,107.5 | * 20 |
| * 1,524 | * 32.5 |

1. For each table, answer: What is the constant of proportionality?

|  |  |
| --- | --- |
| * a | * b |
| * 2 | * 14 |
| * 5 | * 35 |
| * 9 | * 63 |
|  |  |

|  |  |
| --- | --- |
| * a | * b |
| * 3 | * 360 |
| * 5 | * 600 |
| * 8 | * 960 |
| * 12 | * 1440 |

|  |  |
| --- | --- |
| * a | * b |
| * 75 | * 3 |
| * 200 | * 8 |
| * 1525 | * 61 |
| * 10 | * 0.4 |

|  |  |
| --- | --- |
| * a | * b |
| * 4 | * 10 |
| * 6 | * 15 |
| * 22 | * 55 |
| * 3 |  |

* (From Unit 5, Lesson 1.)

1. Here is a table that shows the ratio of flour to water in an art paste. Complete the table with values in equivalent ratios.

|  |  |
| --- | --- |
| * cups of flour | * cups of water |
| * 1 |  |
| * 4 |  |
|  | * 3 |
|  |  |

* (From Unit 2, Lesson 9.)



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