### 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 tolistener (ft)
 | * + soundlevel (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 $\frac{1}{10}$ mile then $0.10 for each additional $\frac{1}{10}$ 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)
 |
| * $\frac{9}{10}$
 |  |
| * 2
 |  |
| * $3\frac{1}{10}$
 |  |
| * 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
 |
| * $\frac{1}{3}$
 | * $\frac{7}{3}$
 |

|  |  |
| --- | --- |
| * 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
 | * $7\frac{1}{2}$
 |

*
* (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
 | * $\frac{1}{2}$
 |
| * 4
 |  |
|  | * 3
 |
| * $\frac{1}{2}$
 |  |

* (From Unit 2, Lesson 9.)



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