$\qquad$ Date: $\qquad$
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# Lesson 8: Identifying Proportional and Non-Proportional Relationships in Graphs (Graph to Table) Bellringer 

1) What are the cooridinates for point $E$ ?
a. $(5,2)$
b. $(2,5)$
c. $(0,6)$
d. $(2,8)$

2) Write three ratios that are equivalent to the one given: 18 football players for every 12 soccer players.
$\qquad$
$\qquad$
$\qquad$

# Lesson 8: Identifying Proportional and Non-Proportional Relationships in Graphs (Graph to Table) Classwork 

## REVIEW:

Characteristics of graphs of proportional relationships:

We can also conclude if a set of values are in a proportional relationship by looking at the graph of the ordered pairs!

## Example 1:

The graph below represents the relationship of height above the ground to time for a hotair balloon.


| Time | Height above <br> ground (in <br> miles) |
| :---: | :---: |
| 1 |  |
| 2 |  |
| 2.5 |  |
| 3 |  |
| 4 |  |

What is the unit rate? Plot it on the graph.
Does the graph represent a proportional relationship? $\qquad$
$\qquad$

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## Example 2

The graph below represents the relationship of number of song downloaded to number of visits to the iTunes® store.


| \# of Web Visits | \# of downloads |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

What is the unit rate? Plot it on the graph.
Does the graph represent a proportional relationship? $\qquad$

If my child visits the iTunes store 60 times how many songs should I expect them to have downloaded?

## Example 3

Samantha types an average of 50 words per minute. Which of the following graphs shows the relationship between total number of words typed and time spent typing?
A.


B.

D.


| Time (in <br> minutes) | \# of words <br> typed |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
|  |  |

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You Try!

1) The graph below represents the relationship between distance from home and time in hours during a family road trip.


What is the unit rate? Plot it on the graph.
Does the graph represent a proportional relationship? $\qquad$

At this rate, if you have been in the car for 12.3 hours how many miles have you traveled ?
2) I want to bake 12 dozen cookies. If I can bake 2 dozen cookes in an hour how long with it take me to bake all twelve dozen cookies.
a. What is my unit rate of dozen cookies per hour?
b. Make a table and graph representing the relationship.

|  |  |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |



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## Homework

1) The table below represents a proportional relationship. What point on the graph represents the unit rate?
a. $(1,1)$
b. $(1,2)$
c. $(2,1)$
d. $(2,4)$

2) Find the unit rate for each of the proportional relationships below.


3) Grandma Antoinette can make 4 loaves of rubarb bread in 3 hours.
a. Create a table showing the relationship between loaves of bread baked and hours spent baking.
b. Graph the ordered pairs on the coordinate grid (label your axis).
c. What point represents the unit rate?

| Time spent <br> baking (in <br> hours) | Loaves baked |
| :---: | :---: |
|  |  |
|  |  |
|  |  |
|  |  |


$\qquad$
$\qquad$
$\qquad$


# Lesson 8: Identifying Proportional and NonProportional Relationships in Graphs (Tables to Graphs) Exit Ticket 



For each of the graphs below state whether they represent a proportional relationship and how you know. If the graph does represent a proportional relationship find the unit rate.


## Proportional Relationship? Yes/No

How do you know?

Unit Rate:


Proportional Relationship? Yes/No
How do you know?

Unit Rate:

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