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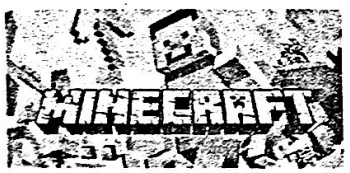
Determining Proportional Relationships Practice (Day 1)

1) After learning about Proportional Relationships in class today, Sean wonders if there are any proportional relationships in his favorite game MineCraft. He recorded the number of creepers that came into his town in the table BELOW.



Time (hours)	3	6	9	12	15
# of creepers	9	18	27	36	45

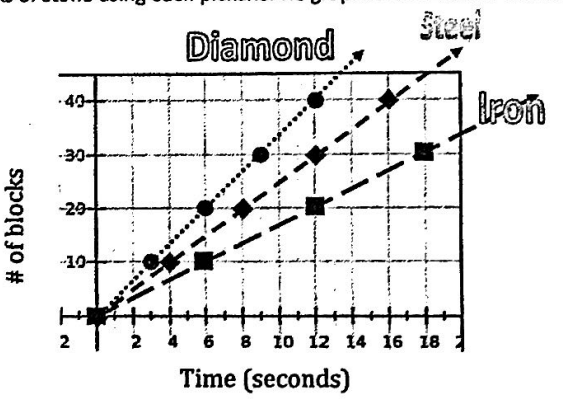
(Creeper)

a) Prove that time is proportional to the number of creepers.

b) How many creepers would be in town after 20 hours?

c) Is there a rule to figure out the number of creepers if you know the time?

2) In Minecraft, Sean earned 3 different pickaxes to mine resources needed to build in the game. While playing, he recorded the time it took to mine blocks of stone using each pickaxe. He graphed the data he collected.



a) Sean believes the relationship between time and the # of blocks is proportional for all 3 pickaxes. He also believes the graph is enough evidence to prove it. Explain why.

3) Use the graph of each pickaxe to make a table for each. Use the tables to provide addition evidence to prove the relationships are proportional.

Iron

Time (sec)	# of blocks

Steel

Time (sec)	# of blocks

Diamond

Time (sec)	# of blocks

* Give constant of proportionality for all 3.
* Give an equation for all 3.

- Describe in words

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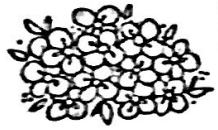
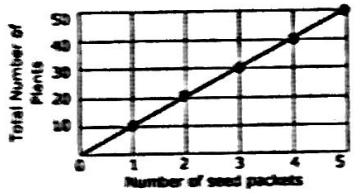
Identify the Constant of Proportionality Independent Practice Worksheet

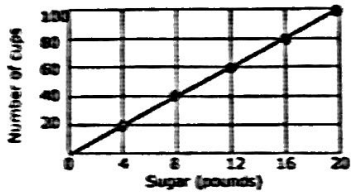
Complete all the problems. Make sure to draw pictures to help you solve the problems.

1. The graph below represents the total number of plants and number of seed packets used. What is the constant of proportionality?





2. The graph below represents the total number of cups of coffee and the total amount of sugar required to make the coffee. What is the constant of proportionality?



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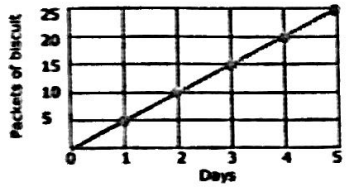
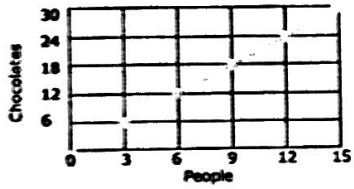
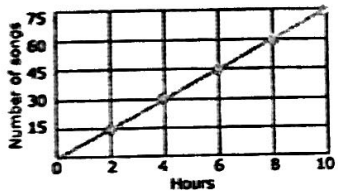
3. The graph below represents the packets of biscuits consumed over time. What is the constant of proportionality?



4. The graph below represents the chocolate consumed by people. What is the constant of proportionality?



5. The graph below represents the number of songs played on a radio station. What is the constant of proportionality?



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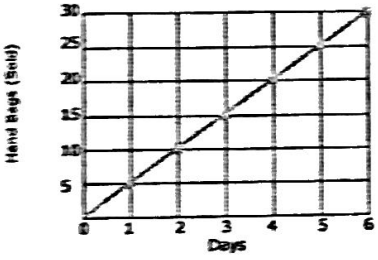
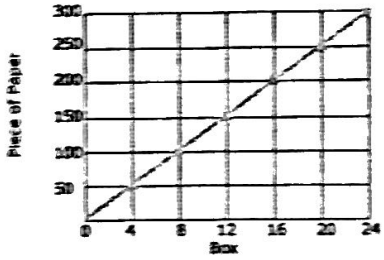
6. The graph below represents the number of hand bags sold over a certain number of days. What is the constant of proportionality?



7. The graph below represents the number of pieces of paper that are found in boxes. What is the constant of proportionality?



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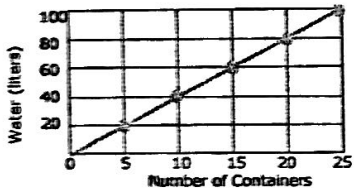
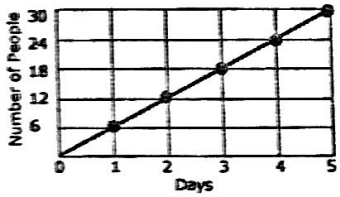
8. The graph below represents the number of containers and liters of water contained in the containers. What is the constant of proportionality?



9. The graph below represents the number of people that go to church on the week days. What is the constant of proportionality?



10. The graph below represents the number of clothes washed by the number of washing machines. What is the constant of proportionality?