**Purchasing Power**

**Gr. 10 section …………….**

**Students’ Names: ……………………………………..**

**Students’ Names: ……………………………………..**



**Due Date: Nov 24, 2011**

**Introduction**

Students learn how saving helps people become wealthy. They work through a series of exercises, learning how to investigate a personal purchase. In so doing, they will learn the importance of saving early and often, and saving as much as possible.

They will also gain a stronger understanding of relations and functions through an activity involving mapping of names.

**Objectives**

* Students use what they have learned about equation and inequalities to investigate a personal purchase.
* Students use what they have learned about equations and inequalities to graph them using graphing websites.
* Do research to investigate the price range from different retailers.
* Students will use Microsoft Word or other software to construct a mapping diagram to illustrate a relation between their own names and the names of their fathers.

**Steps to be followed:**

1. Research the internet to identify a reasonably expensive item that you would like to buy (laptop, IPOD,IPAD, Playbook, Playstaion, etc.). The following links will help:

<http://www.buy.com/>

<http://www.aido.com/?gclid=CMn_mceEn6sCFcUf4Qodx0rjjA>

<http://shopping.yahoo.com/>

1. You should research retail prices for your chosen product (this can be done by using the internet for searching or you might actually walk into markets) and produce a list that ranges from lowest to highest available.

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| --- | --- |
| Retail Name | Price |
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1. Now you are asked to write a compound inequality that represents the price P range, where A and B represent the lowest and highest price respectively.

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1. Graph the set of solutions using number line. Is it a closed or open interval? Explain you answer.

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1. If you get a salary of (Write your salary) dirham that goes into your bank account at the end of each month, you want to have A (lowest price) or B the (highest price) in your account by the beginning of the summer for your chosen purchase. If you withdraw N dirhams each month for food, clothes and movie tickets. Write an equation that represents your situation.

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1. How many months will you need in order to have enough money in your account for your purchase using both the least and the most expensive amount?

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1. At some point on your savings journey you decided to take a personal loan from your bank. The amount you borrow will depend on how far you have come in your saving. For example, if your purchase costs 1250 AED and you have managed to save 300 AED in your first month, then you will borrow 950 AED. Now incorporate the loan amount (y) and write a revised equation for the actual amount you will borrow.

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1. Use the link below to graph the linear equation you wrote for the loan amount. Explain your solution.

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<http://www.coolmath.com/graphit/>

<http://gualtierozorni.altervista.org/grapher/grapher_e.htm>

1. Consider a relation defined from boys in your class to their parents defined by ‘is son of’.
2. Write the number of elements in the domain.
3. What can be the maximum number of elements in the range?
4. Using Microsoft Word or other software, construct a mapping diagram, mapping the elements of the domain (student names) to the elements of the range (father names).
5. Is this relation a function? Give reasons.

**MCj04238280000[1]Final Outcome of this project:**

1. **A portfolio containing:**
   * A ***title page.***
   * An ***introduction*** describing the purpose of this activity.
   * A step by step **description** of the progress of the project.
2. An **oral presentation** describing the steps you followed to achieve your project and **explaining** the **results (**findings and discoveries**)** achieved.

**MCj04107870000[1]**

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| |  |  | | --- | --- | | **Projects Rubric Guidelines** |  | |
| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | |  | **Criteria** | **Points** | | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | **4** | **3** | **2** | **1** |  | | **Completeness of Tasks**  **20%** | **Tasks are totally completed and correct. (100%)** | **Tasks are partially completed,**  **OR**  **Partially wrong.(75%)** | **Tasks are partially completed,**  **AND**  **Partially wrong (50%).** | **Tasks are Attempted (25% or less)** | **\_\_\_\_** | | **Presentation and Integration of Technology**  **70%** | **Students used one mean of technology. The tool used helped the student and was useful to support his project. Moreover, the student was able to explain the work he/she submitted confidently and fluently; he/she was able to answer all of colleagues and instructor’s questions** | **Student used a mean of technology but it was not that supportive to the topic. In addition, student was able to explain the work he/she submitted confidently and fluently and he/she reflected an understanding of his/her works. The student was able to answer most of colleagues and instructor’s questions.** | **Student was able to explain the work he/she submitted. Student reflected a shallow understanding of his/her work; she was able to answer some of colleagues and instructor’s questions,** | **Student use of technology was primitive and way below the level of other IAT students.**  **Student was unable to explain the work he/she submitted. Student reflected no understanding of his/her work; he/she was unable to answer any of colleagues and instructor’s questions.** | **\_\_\_\_** | | **Creativity& enrichment**  **10%** | **Student had an outstanding addition in all aspects of his/her project.** | **Student had an outstanding addition in some aspects of his/her project.** | **Student had an outstanding addition in very few aspects of his/her project.** | **Student had an outstanding addition in no aspects of his/her project.** | **\_\_\_\_** | | **This rubric is out of 100, percentage orientation.**  **To make the mark out of 30 (Student’s Mark/10\*3)** | | | | **Total---->** | **\_\_\_\_** | | |