

# Things I've Tried

ASU Mathematical Sciences Department

Graduate Pedagogy Seminar

October 25, 2005

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# Assessment techniques

In-class problem sets

Homework with hints

Worksheets

WebCT problem sets

Quizzes

2-stage quizzes

Gateway quizzes

Portfolios

The usual: Homework, exams, final exams

## **Math 3110 Homework 6**

**Due: 10/6 at 5pm**

Section 3.1, page 119: problems 9, 10, 14, 24, 26, and 32.

### **Hints:**

3.1.9-10: If the set is a group, just assert that. If it's not a group, give an example showing that one clause of Definition 3.1 fails.

3.1.14: If you can find the identity, the rest follows easily.

### **Proof portfolio (due 12/6)**

From HW1: page 10 problem 22.

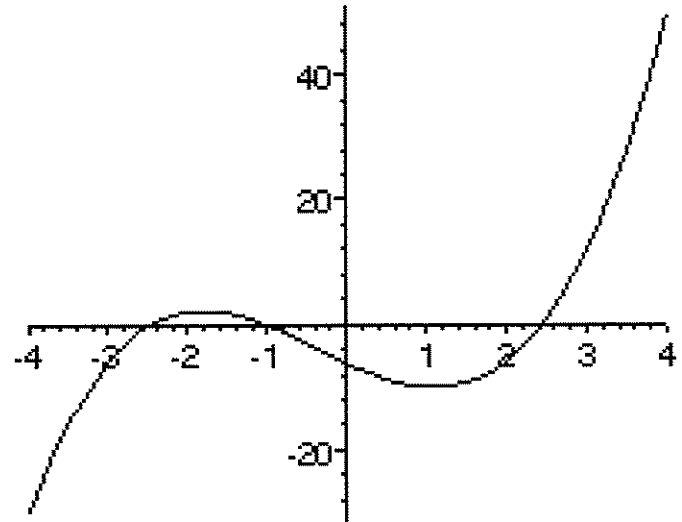
From HW2: page 65 problem 32.

# In-class Problem Set 5

Name: \_\_\_\_\_

Due: Monday 2/16 by 5pm

1. Find the *exact* value of the rightmost root of  $x^3 + x^2 - 6x - 6$ . Your answer should contain a square root. (The polynomial is graphed below.)



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Suppose that

$$f(x) = \sqrt{3+x}$$

and

$$g(x) = \sqrt{10+x}$$

Calculate  $f(g(0))$ . Give your answer in decimal form, and include at least two digits after the decimal point.

Answer:

---

**Netscape: Question Database**

Location: [http://www.webot.appstate.edu:8900/SCRIPT/MAT1025105\\_D04/scripts/designer/serve\\_new\\_quiz](http://www.webot.appstate.edu:8900/SCRIPT/MAT1025105_D04/scripts/designer/serve_new_quiz) What's Related

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**Title:** Problem 2: Calculate the value of composed functions

**Question:**

```
<font size=+2>
Suppose that<br>
<br> and<br>
<br>
Calculate f(g(x)). Give your
```

Format:  HTML  Text

Formula:  $(3+(10+(x))^{.5})^{.5}+.5$

Variables: x Min: -10 Max: 10 Decimals: 0 Decimal Place(s):

Calculate Answer Sets to: 3

Answer Set:  Number/set: 10

Number	x	Answer
1	1	2.513
2	0	2.482
3	-6	2.236
4	-6	2.236
5	8	2.691
6	7	2.669
7	-5	2.288
8	-7	2.175
9	7	2.669
10	-8	2.101

Answer Tolerance (+/-): .01 Units:

Units: Value: 0  % of the Question Value

Required:  Yes  No

Ignore Spaces:  Yes  No

Ignore Case:  Yes  No

Math 1025

Quiz 5

Name \_\_\_\_\_

Corrections to this quiz will be due on Monday 2/23 by 5pm.

1. The graph of  $p(x) = x^3 + 2x^2 - 15x - 30$  is shown below.
  - (a) Find the value of the middle root of  $p(x)$ .
  - (b) Find the *exact* value of the leftmost root of  $p(x)$ .

# Time management issues

In-class

Grading

## Why bother?

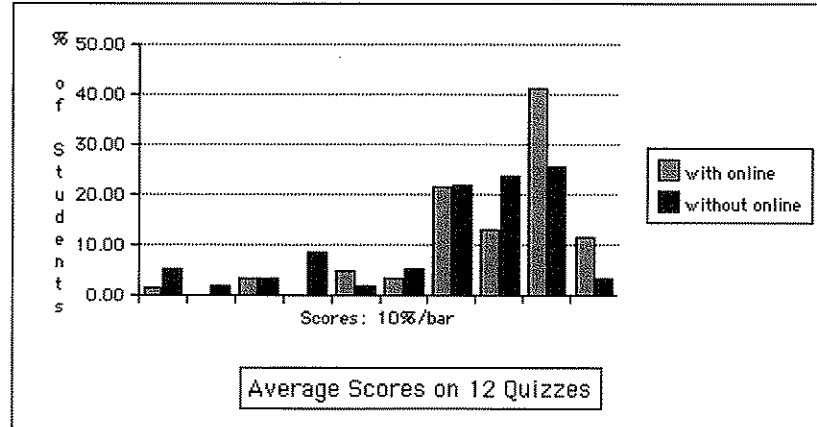
Student performance

Non-correlation

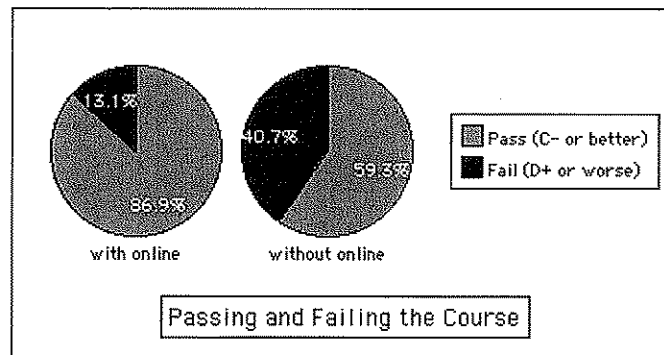


The following data compares a group of precalculus students taught with online homework (n=61) to a group taught without (n=59).

Performance on twelve in-class on-paper quizzes improved.

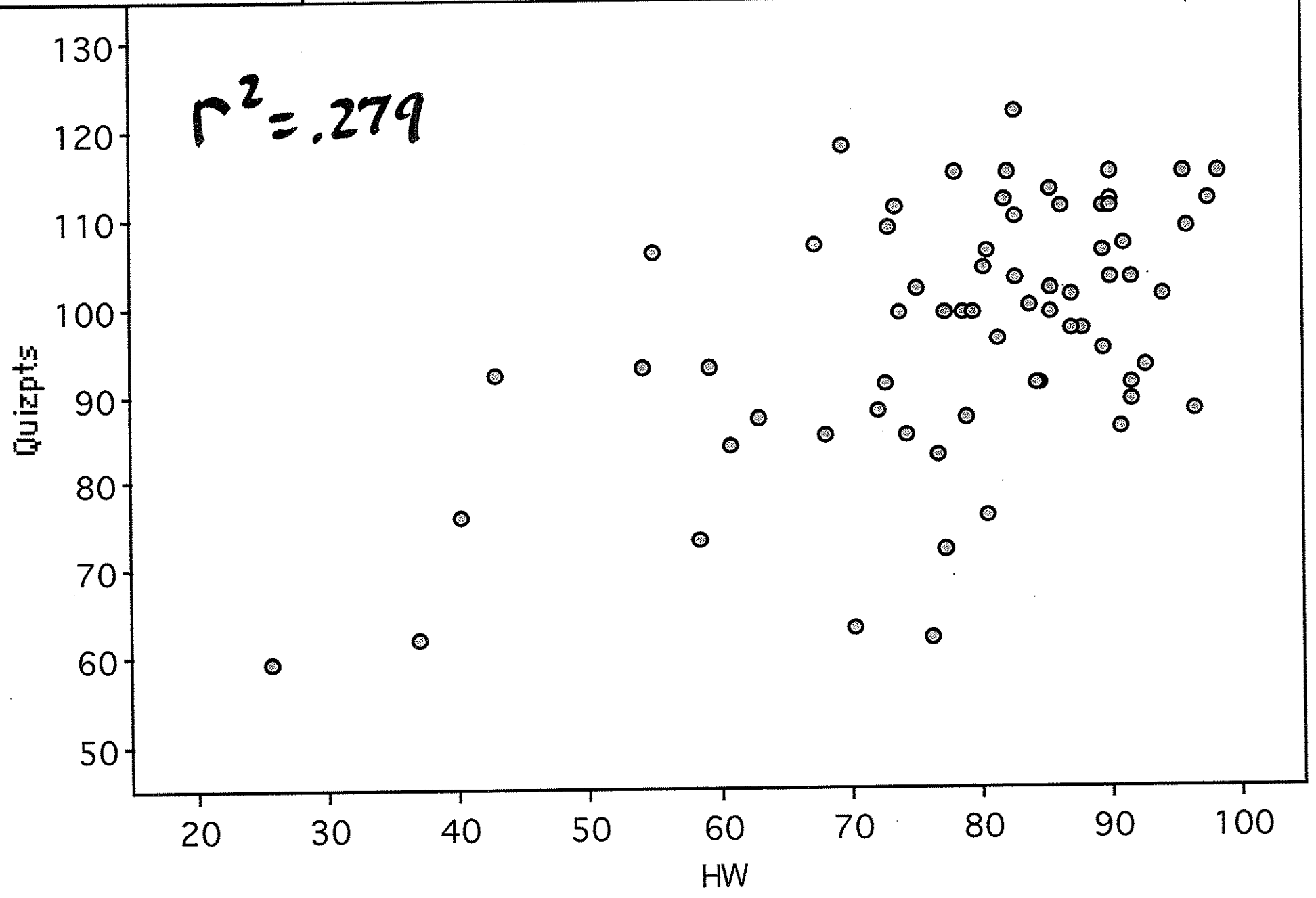


Fewer students failed.



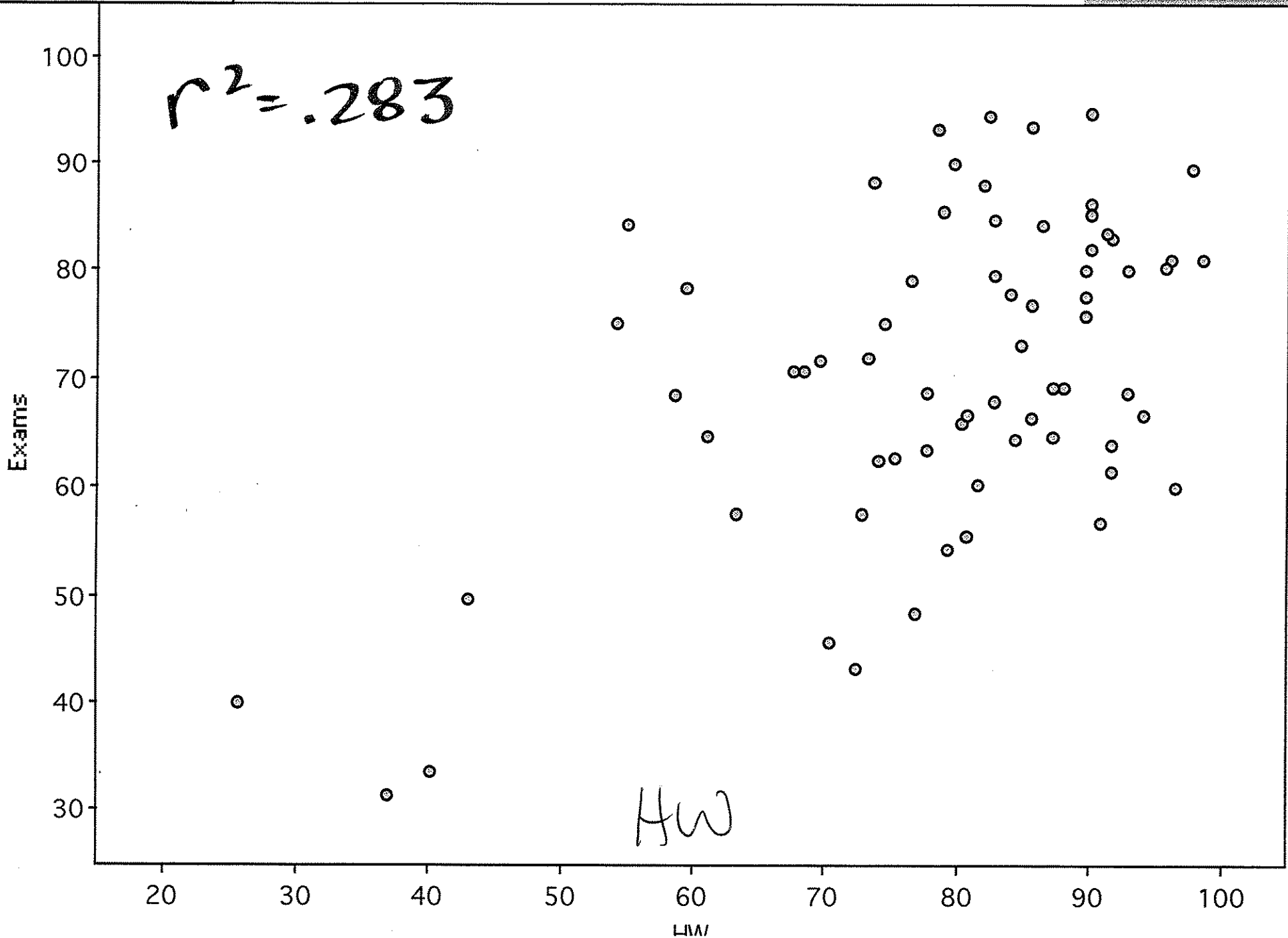
MAT 1110 grades

Scatter Plot



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