

MTH 110
Quiz 1, Form A
Spring 2016

Show all work in a neat and organized fashion. Clearly indicate your answers.
20 points possible.

You may use a calculator.

1. (3 pts.) Identify an apparent pattern in the sequence of numbers. Use this pattern to fill in the blanks with the numbers that complete the sequence.

8 14 20 26 _____ _____ _____ _____ 56

2. (3 pts.) Repeat the procedure below for three numbers of your choice. Write a conjecture that relates the result of the process to the original number selected.

Select a number. Add 8. Double the result. Subtract 6. Divide by 2. Subtract the original selected number.

3. (3 pts.) Express 34% as a decimal.

4. (3 pts.) What percent of 3.5 is 0.63?

5. (3 pts.) You spend $\frac{4}{10}$ of your money. You spent \$96. How much money did you start with?

6. (5 pts.) In this problem, base the taxable income on the greater of a standard deduction or an itemized deduction.

Suppose a taxpayer earned wages of \$87,300, received \$1420 in interest from a savings account, and contributed \$2800 to a traditional IRA tax-deferred retirement plan. The taxpayer is entitled to a personal exemption of \$3800 and a standard deduction of \$5950. The taxpayer paid interest of \$8300 on a home mortgage, contributed \$1350 to charity, and paid \$1630 in state taxes.

(a) Find the gross income.

(b) Find the adjusted gross income.

(c) Find the taxable income.

Calculating Income Tax:

1. Determine your adjusted gross income:

$$\text{Adjusted gross income} = \text{Gross income} - \text{Adjustments.}$$

All income for the year, including wages, tips, earnings from investments, and unemployment compensation

Includes payments to tax-deferred savings plans

2. Determine your taxable income:

$$\text{Taxable income} = \text{Adjusted gross income} - (\text{Exemptions} + \text{Deductions}).$$

A fixed amount for yourself (\$3200 in 2005) and the same amount for each dependent

Choose the greater of a standard deduction or an itemized deduction, which includes interest on home mortgages, state income taxes, property taxes, charitable contributions, and medical expenses exceeding 7.5% of adjusted gross income.

3. Determine the income tax:

$$\text{Income tax} = \text{Tax computation} - \text{Tax credits.}$$

Use your taxable income and tax rates for your filing status (single, married, etc.) to determine this amount.

May include up to \$1000 per child, the cost of child care so a parent can work, and adoption credits for qualified expenses.