

Accuplacer – Arithmetic Content

The Arithmetic test measures students' ability to perform basic arithmetic operations and to solve problems that involve fundamental arithmetic concepts. There are three content areas measured on this test: (1) Whole numbers and fractions, (2) Decimals and percents, and (3) Applications. The approximate distribution of these items is listed in the table below. Each examinee is administered 17 items.

The Whole Numbers and Fractions area includes addition, subtraction, multiplication, division, recognizing equivalent fractions and mixed numbers, and estimating. The Decimals and Percents area includes addition, subtraction, multiplication, and division with decimals. Percent problems, recognition of decimals, fraction and percent equivalencies, and estimating problems are also given. The Applications and Problem Solving area includes rate, percent, and measurement problems, simple geometry problems, and distribution of a quantity into its fractional parts.

Questions from all three categories are always presented to the student, although the number of questions from each category varies with the student's skill level. For example, if a student's responses show minimal arithmetic skills, presenting too many applications problems is pointless. On the other hand, a student exhibiting good skills with whole numbers and fractions will be presented with more of these types of problems. As a result, the proportion of questions in the various categories will automatically vary according to the student's responses.

Arithmetic Content Areas	Approximate Percentage of Test*
Whole Numbers and Fractions	
Computation and estimation of operations with whole numbers	0 - 6
Addition and subtraction of fractions or mixed numbers	6 - 10
Multiplication involving fractions or mixed numbers	6 - 10
Division of a whole number by a fraction or mixed number	6 - 10
Division of a fraction/mixed number by a whole number, fraction, or mixed number	6 - 10
Mixed operations with whole numbers, fractions, and mixed numbers	0 - 6
Squares and square roots (whole numbers, fractions)	0 - 6
Recognition of equivalent fractions and mixed numbers	0 - 6
Estimation of sums, differences, products, and quotients that involve fractions or mixed numbers	6 - 10
Decimals and Percents	
Addition and subtraction of decimals	6 - 10
Multiplication of decimals by whole numbers other than powers of ten and by decimals	6 - 10
Multiplication of a decimal by a power of ten	6 - 10
Division of a decimal by a whole number other than a power of ten or by a decimal	6 - 10
Division of a whole number by a decimal	6 - 10
Division of a decimal by a power of ten	6 - 10
Recognition of fraction, decimal, and percent equivalences	6 - 10

Ordering decimals, fractions, and percents; and rounding	6 – 10
Percent of a number	6 – 10
Percent one number is of another	6 - 10
A number when a percent of it is known	0 - 6
Squares and square roots (decimals)	6 - 10
Applications	
Rate problems including ratio and proportion	6 - 10
Percent problems	0 - 6
Distribution of a quantity into fractional parts	0 - 6
Measurement problems	0 - 6
Average	0 - 6
Problems related to graphs and tables	0 – 6
Other, less routine problems	0-6

*Percentages do not sum to 100 due to the ability of some items to meet multiple content requirements