GRAND PRIX

for Apple,® DOS 3.3

About the Program.

Grand Prix captures the imagination and competitive spirit of students in grades two through nine who work with any of the six different mathematics programs in this exciting, adventuresome Random House product.

Each program provides drill and practice with a specific mathematics concept — Basic Facts, Place Value, Fractions I & II, Rounding and Estimating, Decimals, and Integers.

How the program is organized.

Grand Prix includes six different programs and each one addresses a different mathematics concept.

Basic Facts

Level	Recommended Grade Level	Basic Facts Presented
1	Grades 1-2	Addition and subtraction facts 0-5
2	Grades 2-3	Addition and subtraction facts 0-9
3	Grades 2-3	Addition and subtraction facts 0-12
4	Grades 3-4	Multiplication and division facts 0-5
5	Grades 3-4	Multiplication and division facts 0-9
6	Grades 3-4	Multiplication and division facts 0-12

Rounding and Estimating

Level	Recommended Grade Level	Concept Presented
1	Grades 3-4	Round to the nearest 10, 100
2	Grades 4-5	Round to the nearest 10, 100, 1000
3	Grades 5-6	Round to the nearest whole number, tenths or hundredths
4	Grades 4-5	Estimate to the nearest dollar
5	Grades 4-5	Estimate to the nearest 10 or 100 (sum or difference)
6	Grades 4-5	Estimate to the nearest whole number (sum or difference)

Place Value

Level	Recommended Grade Level	Basic Facts Presented
1	Grades 1-2	Ones to hundreds
2	Grades 2-3	Ones to thousands
3	Grades 3-4	Ones to hundred thousands
4	Grades 4-5	Tenths to hundred thousands
5	Grades 5-6	Hundredths to hundred thousands
6	Grades 5-6	Thousandths to hundred thousands

Fractions

Fractions I

Level	Recommended Grade Level	Fractional Concept Presented
1	Grades 4-5	Compare fractions using $\rangle$, $\langle$, $=$
2	Grades 5-6	Compare fractions using $\rangle$, $\langle$, $=$
3	Grades 4-5	Simplification of fractions
4	Grades 5-6	Simplification of fractions
5	Grades 5-6	Indicate if a mixed number is correctly changed to an improper fraction and vice versa

Fractions II

Level	Recommended Grade Level	Fractional Concept Presented
1	Grades 4-5	Addition of fractions
2	Grades 4-5	Subtraction of fractions
3	Grades 4-5	Addition and subtraction of fractions
4	Grades 5-6	Multiplication of fractions
5	Grades 5-6	Division of fractions
6	Grades 5-6	Addition, subtraction, multiplication, and division of fractions

Decimals

Level	Recommended Grade Level	Decimal Concept Presented
1	Grades 5-6	Compare decimals using $\rangle$, $\langle$, $=$
2	Grades 6-7	Determine if a percent is correctly changed to a decimal and vice versa
3	Grades 5-6	Addition and subtraction of decimals
4	Grades 6-7	Multiplication of decimals
5	Grades 6-7	Division of decimals
6	Grades 6-7	Addition, subtraction, multiplication, and division of decimals

Integers

Level	Recommended Grade Level	Integer Concept Presented
1	Grades 6-7	Compare integers using $\rangle$, $\langle$, $=$
2	Grades 7-8	Addition and subtraction of integers
3	Grades 7-8	Addition and subtraction of integers
4	Grades 7-8	Multiplication of integers
5	Grades 7-8	Division of integers
6	Grades 7-8	Addition, subtraction, multiplication, and division of integers

Who can benefit from the program?

Instructions displayed on the screen during the racing game are written at the third grade level. Before a student begins working any of the programs, (s)he should have been introduced to the mathematics concept that is practiced during the game.

Special features.

Each program in Grand Prix has special characteristics that should be noted by the student who will be playing the game. In Basic Facts, the student must type the numeral. In Place Value, the student must type the numeral located in the place value spelled out on the screen. In Fractions I, the student types **T** for True and **F** for False in answering math questions. In Fractions II, the student must type the numerator, then **RETURN**. After the / symbol appears, the student types the denominator then **RETURN**. In Decimals, the program ignores trailing zeros, e.g. if the answer is 2.1, and 2.10 is entered, the zero is ignored. In Integers, the program accepts a positive integer with or without the + sign but accepts a negative integer only if the − sign is included.

Prerequisite skills.

Students who play any of the Grand Prix programs should have been introduced previously to the mathematics concept which each program addresses. These programs are designed to provide drill and practice only.

How the program works, step by step.

Grand Prix requires the students to successfully answer math questions in order to win the Grand Prix race.

Instructions for completing the race are displayed on the monitor's screen. These instructions are written on the third grade level.

A compact version of the sequence in each Grand Prix game is shown here:

1. Correctly answer 0-5 math questions to fuel the car
2. Correctly answer 0-5 math questions to add oil
3. Correctly answer 0-4 math questions to change tires
4. Correctly answer 3-5 questions to obtain mechanical repairs
5. Correctly answer math questions to complete laps around the track and defeat your opponent.
6. Make necessary adjustments to the car or on the track when **Flag** (or **Warning**) messages appear during the race

The racing details of Grand Prix (its vocabulary) are defined here.

Response Time — The student must respond within an allotted time or an answer is counted wrong. Apprentice rank has the longest response time, and Defending Champion has the shortest.

Fuel — The player is required to fuel the car before beginning the race. To initially fill the tank, the driver is required to correctly answer 4 math questions. The driver may return to the pit at various times during the race to obtain additional fuel when necessary. When the player correctly answers a math question, a quarter of a tank of fuel is added. If the car runs out of fuel during the race, the player is disqualified and the game ends.

Oil — Drivers must select the number of quarts of oil (0-4) they want. One quart of oil will be added for each math question answered correctly. During the race, an **Engine** warning signals the player to return to the pit for additional oil. Failure to heed the warning could result in the engine burning and the race ending.

Tires — The driver must make sure the tires are in good shape. In the pit, the player may change 0-4 tires. When the **Tire** warning appears during the race, the player should return to the pit and change tires. Failure to heed the warning will result in a tire blowout and the player being disqualified from the race.

Engine Repair — Before beginning the race, the driver must make sure the engine is functioning properly. If engine repairs are selected, 3-5 math questions must be answered correctly. When the warning message **Engine** appears during the race, the driver should return to the pit and obtain engine repairs. If not, the engine will burn and the race will end.

Pit — The pit is a segment of the game where the player can obtain fuel, oil, engine repairs, and change tires.

Track — The track is the segment of the game where the player correctly answers math questions to move his/her car around the track. Two track formations are available: the simpler track for the Apprentice and Rookie ranks, and the more difficult track for the Veteran and Defending Champion ranks.

Flags — Flags appear during the race informing the player about track conditions and his/her position in the race. The **Green Go Flag** is used to begin the race and remains when questions are answered correctly. The **Yellow Caution Flag** appears when a question is answered incorrectly. The **Yellow Danger Flag** appears when the 2nd consecutive question is answered incorrectly. The **Black Stop Flag** appears when the 3rd consecutive question is answered incorrectly. The game ends at this time. The **White Last Lap Flag** appears when the driver or the opponent begins the last lap. The **Checkered Winner Flag** appears when the winner's car crosses the finish line.

Speedometer — The speedometer indicates the speed with which the car is traveling. The faster questions are answered correctly, the greater the rate of speed.

Laps — The lap counter shows which lap the driver is currently making around the track.

Time — A record of the driver's time for the race. This includes both track and pit time.

Opponent's Car — The car that occupies the outer lane of the track. The player must pass the opponent's car in order to win the race. The faster questions are answered correctly, the further ahead of the opponent's car the driver can move.

Trophy — Awarded when the player successfully completes the race. The player's time, rank, level, and name appear on the trophy.