

**SOLE HALT**  
**VISIT: SOLEHALT.COM**  
**CONTACT: 9354038314**

**This is just for reference. You can also copy most of it from this. But it will be better if you conduct the practical and write your own interpretation and conclusion. If you wish to contact us, please drop a text via WhatsApp only.**

---

### **TITLE**

STANDARD PROGRESSIVE MATRICES (SPM)

### **AIM**

To assess non-verbal intelligence and logical reasoning

### **INTRODUCTION**

Progressive Matrices has played an important role as an instrument to assess non-verbal intelligence and especially logical reasoning for a very long time.

The Raven's Progressive Matrices Test (1932-1956) was developed in England and widely used in the British Army during World War. It was developed to evaluate the subject's ability to apprehend relations between geometric figures and designs and to perceive the structure of the design in order to select the appropriate part of the completion of each pattern and system of relations.

In each test, the subject is asked to identify the missing element that completes a pattern. Many patterns are presented in the form of 6X6, 4X4, 3X3 or 2X2 matrix giving the test its name.

The test is available in 3 different forms for participants of different ability:

- a. Standard Progressive Matrices (SPM)
- b. Colored Progressive Matrices (CPM)
- c. Advanced Progressive Matrices (APM).

SOLE HALT  
VISIT: [SOLEHALT.COM](http://SOLEHALT.COM)  
CONTACT: 9354038314

---

Raven's Progressive Matrices (referred to as Raven's Matrices) or RPM to a non-verbal group typically used in educational settings. It is usually a 60 item test used in measuring abstract reasoning and regarded as a non-verbal estimate of fluid intelligence. It is the most common and popular test administered to groups ranging from 5 years old to the elderly. It is made of 60 multiple choice questions listed in order of difficulty. This format is designed to measure the subject's ability to learn the educative (making) component Spearman g (g is referred to as general intelligence). The test was originally developed by John C. Raven in 1936. In each test item, the subject is asked to identify the missing elements that complete a pattern.

### **DESCRIPTION OF THE TEST**

Standard Progressive Matrices were the original form of the matrices, first published in 1938 by John C. Raven. SPM is used to test abstract intelligence of all individuals. The SPM was developed for use in homes, schools and workplaces as well as laboratories. The test comprises 5 sets (A to E) of 12 items, with items within a set becoming increasingly difficult, requiring even greater cognitive capacity to encode and analyze information.

This test consists of 5 series or act of diagrammatic puzzles exhibiting serial change in 2 dimensions simultaneously (pattern and shape). All items are presented in black ink on white background. Each puzzle has a part missing which the subject has to find among the options provided. The SPM was designed to cover the widest possible range of mental ability and to be equally useful with persons of all ages, whatever their background (educational, nationality or physical condition) be. It covers the whole range of intellectual development from the time a child is able to group the idea of finding a missing piece to complete a pattern to the level of ability required to form comparison and reasons by analogy.

### **RELIABILITY**

The split half reliabilities were  $r^*.90$  in over 40 studies with people of different ages and from diverse cultural backgrounds.

The test indicates test-retest reliability varying between  $r_4 = 0.83$  and  $r_n = 0.93$  in summarizing overview.

The internal consistency between  $r = 0.77$  and  $r = 0.96$  was extracted in various norm samples.

The test-retest reliability according to Laroche “repeated a correlation after one week of 0.85 with 6th grade congo school boys. Data with value of 0.88 also with congo school boys after several weeks. With this latter study there is no indicator of the sample size, which unfortunately denies a further retest at one year yielded a correlation 0.55.

### **VALIDITY**

Raven Matrices Test assesses general intelligence and the various fundamental abilities necessary in everyday life. This is why the correlations with other tests or external criteria are most of the time rather low inter-correlation are the highest with arithmetic, technological and scientific abilities. Correlation between SPM and school performance result in value up to  $r = 0.70$ .

Correlation with one's intelligence and ability tests vary between  $r = 0.20$  and  $r = 0.80$ . Factor analytical calculation shows high values in the g factor, after amounting up to  $r = 0.95$ .

For English speaking children and adolescent, reliable correlation of the SPM with the Binet and Wechsler Scale range from 0.54 to 0.86 Roger and Holmes demonstrated SPM and WISC-R correlations between 0.83 to 0.92 in a stratified sample of 1 to 11 year olds.

### **MATERIALS REQUIRED**

SPM Manual  
Raven's SPM booklet  
Response sheet  
Paper  
Pencil  
Eraser  
Stop watch

### **SUBJECT'S PROFILE**

<b>NAME</b>	Sujata
<b>AGE</b>	25 Years
<b>GENDER</b>	Female
<b>EDUCATION</b>	B.Tech.
<b>OCCUPATION</b>	Engineer

### **PROCEDURE AND ADMINISTRATION**

#### **Preparation:**

The materials required were arranged and kept ready.

#### **Rapport:**

Introduce yourself to the subject. Firstly, make the subject relax by indulging in some social conversation. Discuss about the significance of the test i.e. its purpose, its dimensions as the person taking the test selects one out of 8 options. Tell the subject that as a set of tests is going, the level of complexity will increase. There is a possibility of

**SOLE HALT**  
**VISIT: SOLEHALT.COM**  
**CONTACT: 9354038314**

---

multiple conservation by switching to another answer or even by returning to the previous item. In case a respondent is not able to select an answer, the subject may omit the item. All the omitted items will be presented again at the end of the test.

**Instruction:**

The particulars of the person to be tested are filled in the record form. The pattern to be completed or attempted to be completed is to be explained to the subject. It is a pattern with a piece taken out. Each of the pieces below is the right shape to fit the space but they do not all complete the pattern. Instructor explains why numbers 1, 2, 3 are wrong and why 6 is nearly right.

The subject is then instructed to point to a piece which is quite right. If the subject does not point to the right piece, the subject continues explanation until the nature of the problem to be solved is clearly grasped.

The instructor also has to explain that the patterns are simpler in the beginning and later they become complex. Hence it is important to pay attention to the pattern.

**Precautions:**

The instructor should not assist the person/subject in the method of work.

Do not demonstrate the person.

The place of the test should be noise free.

The subject should not feel stress. The environment should be calm and relaxing.

Correctly check each response at the end of the test and totalling them.

Correctly compare raw to expected score.

**Introspective Report:**

The subject initially was slightly nervous at the beginning of the test but became interested. However, as the test started becoming complex, the client/subject started losing patience and was not able to solve all.

**Scoring:**

The test consists of 5 sets (A, B, C, D, E). Each set has 12 items, total items are 60. There are 2 blank columns for each set in response sheet in the first column, the instructor fills correct response serial number, eg., 4 for set A of the first item. In the second column the response is filled. For each correct response the instructor should give a “1” score in the 2nd column, there is no negative marking for incorrect response. At the end of each column the total score should be totalled and mentioned. The grand total should also be mentioned.

On the basis of grand score, the expected scores are mentioned at the end of each column. Refer the manual table SPM-2 for expected score, which in turn gives discrepancy in each set of scores. The subject has obtained a score of 41.

**Conclusion:**

The SPM is a non-verbal mental ability test that requires a solution to problems. The SPM measures observation skills, clear thinking ability, intellectual capacity and intellectual efficiency. Specifically the SPM measures the ability to:

- Formulate new concepts when faced with novel information.
- Extract meaning out of confusion or ambiguity.
- Think clearly about complex situations and events.

The SPM score indicates potential for success in positions that typically require clear and accurate thinking, problem identification and evaluation

SOLE HALT  
VISIT: [SOLEHALT.COM](http://SOLEHALT.COM)  
CONTACT: 9354038314

---

of tentative solutions for consistency with all available information. Such positions may include middle management, supervisory and equivalent level technical or professional non-managerial positions. The non-verbal aspect of SPM minimizes the impact of language skills on performance on the assessment.

The subject has obtained a score of 41 which indicates that the subject is intellectually average indicating that the subject can have some difficulty when faced with challenges to formulate new concepts when faced with novel information, extract meaning out of confusion or ambiguity, think clearly about complex situations and events.