



DEFENCE FORCE RECRUITING

A Guide to Aptitude Testing for Joining the ADF

This guide seeks to provide you with an overview of the psychological testing process that you will undertake when applying to join the ADF. The ADF psychological testing process includes:

- A General Ability Test; and
- A Mathematical Ability Test.

Depending on the role applied for, you may also be required to sit additional testing, such as:

- Testing for Officer entry;
- Testing for Aircrew and Aviation related roles; and
- Testing for Other Specialist Occupations.

This guide will provide you with an idea of what to expect during psychological testing, and hints and tips to help prepare you for this testing.

What is psychological testing?

The aim of psychological testing is to determine what skills and abilities candidates have and then to match the ADF jobs that require these same sets of skills and abilities.

The psychological testing process

During the psychological testing sessions you will be asked to answer a series of questions within a restricted period of time. You should attempt to get as many questions correct as possible in the time allowed. All tests include questions that range from the relatively straightforward to others that are quite difficult.

Psychological testing can be administered either by computer, or in paper-and-pencil format. We hope that most applicants will feel comfortable completing the computer-based versions of the tests. However, if you are not comfortable using computers, and would prefer to complete the paper-and-pencil tests instead, you will be permitted to do so.

Instructions will either be read to you before you begin each test, or included as an introduction where testing is done on a computer. Listen carefully to the instructions, and feel free to ask the test room supervisor questions if you are not sure what to do. Ensure that you read the question carefully and understand what you are being asked to do. **You must give only one answer per question**, except where specifically told otherwise.

This document is provided by Defence Force Recruiting (DFR). Contact your Case Manager on 13 19 02 for any enquiries.

What can you take into the room?

You will be able to take your personal belongings into the room. However, you must turn off all electronic equipment, including your mobile phone. You are not allowed the use of a calculator or a dictionary of any variety during any of the psychological tests. You are not permitted to use any material that may aid or advantage you when completing the tests, and if you are found using these, your test scores will not be deemed valid.

During the test session you will be provided with pencils, an eraser, and writing paper. Please remember to bring your reading glasses on the day to assist you in reading the computer screen or printed test material.

Preparing You for Testing

Below are some ideas that may help you prepare for psychological tests.

Preparation Resources

You may find attempting practice questions to be useful. This guide has some practice questions in Annex A. In addition to the questions provided in this guide, practice tests containing test items similar to those used by the ADF can be obtained from bookstores, your local library, and online from test publishers.

Preparation Tips

- The following are a few tips to help you prepare: If you find you are having trouble with particular types of practice items (e.g. maths, language), you may wish to seek assistance from friends, tutors, or books;
- Do not attempt to prepare in one big session the night before you are due to undergo testing. Try to space your study periods out (e.g. an hour a day); and
- While preparing, don't simply read over information, practice recalling and using it. Attempt to test yourself on how much you have learnt wherever possible. This may also help you identify areas in which you need further practice.
- On the day of testing you should plan to arrive at the Defence Recruiting testing area well rested, in good health, and with plenty of time so you are not rushed.

Test Taking Instructions

Before you start the test:

- Listen carefully to the instructions given by the test supervisor;
- Read the test instructions very carefully. If you have any questions, make sure you ask the test supervisor before you start the test.

Once the test starts:

- Read every question carefully and ensure you understand what you are required to do; and
- Work as quickly and as accurately as you can.

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For multiple choice tests:

- Read all the possible answers before selecting one;
- Ensure that the question you are marking on the answer sheet matches the one you are intending to answer in the question booklet;
- Give only one answer per question (except where specifically instructed otherwise); and
- If you make a mistake with paper and pencil tests, rub it out with your eraser or using the method demonstrated by the test supervisor.

Summary

The outcome of your testing will provide Defence Force Recruiting a deeper understanding of your aptitudes/abilities and underlying knowledge, so that they can assist you in identifying an occupation for which you are best suited. Although some candidates might not obtain high enough scores for the occupation they most prefer, most will find that they are suitable for some form of employment within the ADF. All candidates, including those who do not achieve high enough scores for their preferred occupation, but who still wish to serve in the ADF in some capacity, will receive career information from a Career Coach / Case Manager regarding their chosen career. Or, alternatively, assistance in identifying another job for which they might be better suited.

You will generally be allowed to attempt the aptitude testing on three occasions only, and there is a minimum waiting period of six months between each attempt. No further attempts will be allowed unless the psychologist believes that there are valid reasons for doing so. Specialist testing may have different requirements, your test supervisor will advise you of the number of attempts and the minimum waiting period between tests at the commencement of every testing session.

The strategies and examples in this guide are provided to both familiarise you to the ADF testing process as well as reduce any test anxiety you may be experiencing. It is anticipated that you find the guide useful in your test preparation.

Appendix A

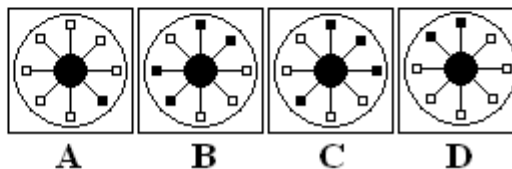
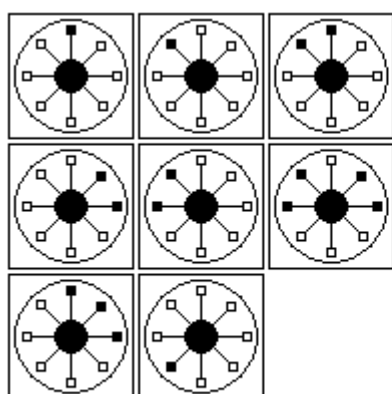
Sample Questions General Ability Test

The following are examples of the type of questions you can expect to see in the General Ability Test. Answers are provided at the end of this appendix.

1. **Arithmetic Question:** Give the number that corresponds with the question mark (?) in the following addition problem:

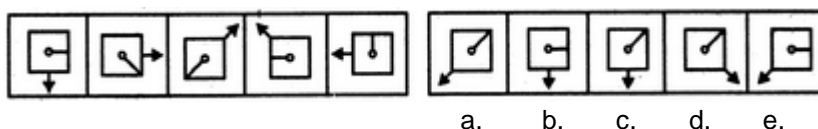
$$\begin{array}{r} 68 \\ + 7? \\ \hline 1?2 \end{array}$$

- a. 2 b. 4 c. 6 d. 8
2. **Number Series:** In the following question, you are given a row of numbers that follow a certain plan. Find the rule and mark the answer which gives the next two numbers.
4, 12, 20, 28, ?, ?
- a. 32, 48 b. 36, 44 c. 30, 40 d. 36, 42
3. **Number Series:** In the following question, you are given a row of numbers that follow a certain plan. Find the rule and mark the answer which gives the next two numbers.
1, 4, 9, 16, ?, ?
- a. 20, 27 b. 25, 36 c. 28, 34 d. 42, 48
4. **Word Code:** In a certain code the word **DREAM** is written EDEREEEAEM. Using the same code, which one of the following means **TRAVEL**?
- a. LEEVEEAERETE b. ETEREAEEVEEL c. TEVEREAEELE d. LEAETAREVE
5. **Abstract Reasoning:** Which figure completes the series?

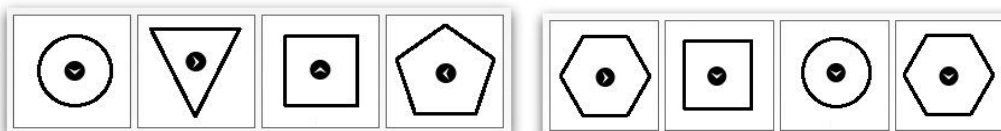


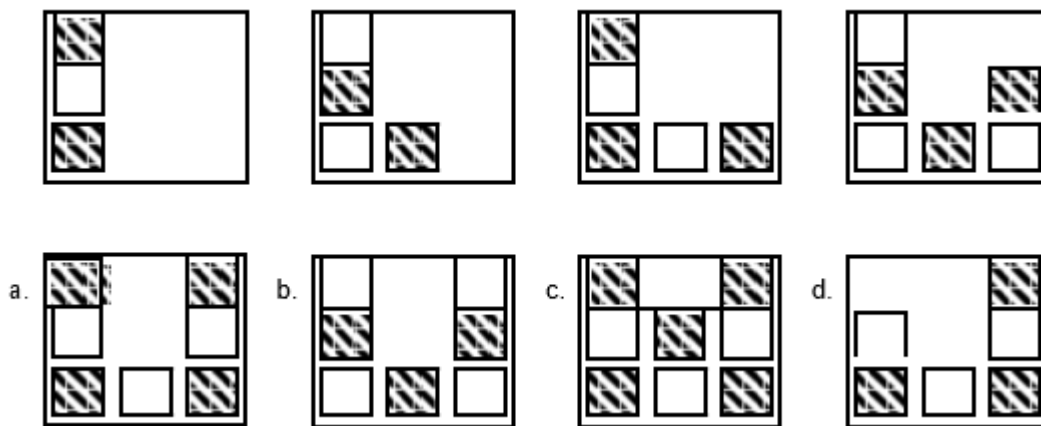
6. **Arithmetic Question:** How many pieces of paper, each costing 20 cents, can you buy for two dollars?
- a. 10 b. 15 c. 20 d. 40
7. **Word Analogy:** **Medicine** is to **Illness** as **Law** is to ?
- a. anarchy b. discipline c. treason d. etiquette

8. **Arithmetic Question:** A bus travels at a constant speed of 80 km/h. How far does it travel in 45 minutes?
 a. 75km b. 70km c. 60km d. 55km
9. **Number Series:** In the following question, you are given a row of numbers that follow a certain plan. Find the rule and mark the answer which gives the next number
 2, 3, 5, 9, 17, 33, 65, ?
 a. 129 b. 130 c. 131 d. 132
10. **Word Meaning:** Mark the word that does not belong to the same group as the others
 a. finish b. dissolution c. conclusion d. initiation
11. **Number Series:** What number comes next in the following series:
 1, 2, 4, 8, 16, ?
 a. 18 b. 24 c. 28 d. 32
12. **Abstract Reasoning:** The first five figures in each line follow one another according to a certain plan. Find what the plan is and then select the next one in the series.



13. **Arithmetic Question:** In covering a distance of 30 km, Celine takes 2 hours more than Sam. If Celine doubles his speed, then he would take 1 hour less than Sam. Celine's speed is:
 a. 5 km/h b. 6 km/h c. 6.25 km/h d. 7.5 km/h
14. **Word Analogy:** Hip is to Ankle as Shoulder is to?
 a. knee b. wrist c. bone d. joint
15. **Word Meanings:** Which word does not belong in this list:
 a. Flower b. Whale c. Elephant d. Dog e. Parrot
16. **Arithmetic Question:** The cost to ride on a ferry is \$5.00 per vehicle and driver with an additional cost of 50 cents per passenger. If the charge to get on the ferry is \$6.50, how many people were in the vehicle?
 a. 1 b. 2 c. 3 d. 4
17. **Word Analogy:** Empty is to Full as Wet is to ?
 a. Damp b. Soaked c. Dry d. Water e. Rain
18. **Arithmetic Question:** A soccer team played 160 games and won 65 percent of them. How many games did it win?
 a. 94 b. 104 c. 114 d. 124
19. **Abstract Reasoning:** The first four figures in the line follow one another according to a certain pattern. Find what the plan is and then select the next one in the series.



20. Abstract Reasoning: Which figure is next in the series?

21. Word Code: In a code, symbols are used to replace letters. Thus **CONTACT** is written $\Omega^* \infty \# \Omega \#$. Using the same code, which of the words below could be written as $\odot^* \pi \# \mathcal{E}$

- a. Track b. Noted c. Nomad d. Action

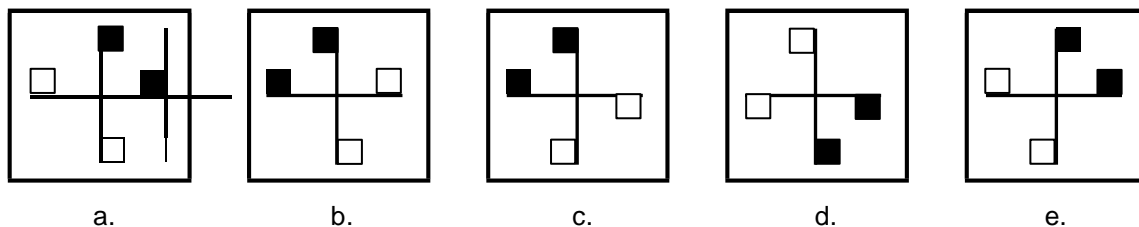
22. Arithmetic Question: Three people who work full-time are to work together on a project, but their total time on the project is to be equivalent to that of only one person working full-time. If one of the people is budgeted for one-half of his time to the project and a second person for one-third of her time, what part of the third worker's time should be budgeted to this project?

- a. $1/3$ b. $3/5$ c. $1/6$ d. $1/8$

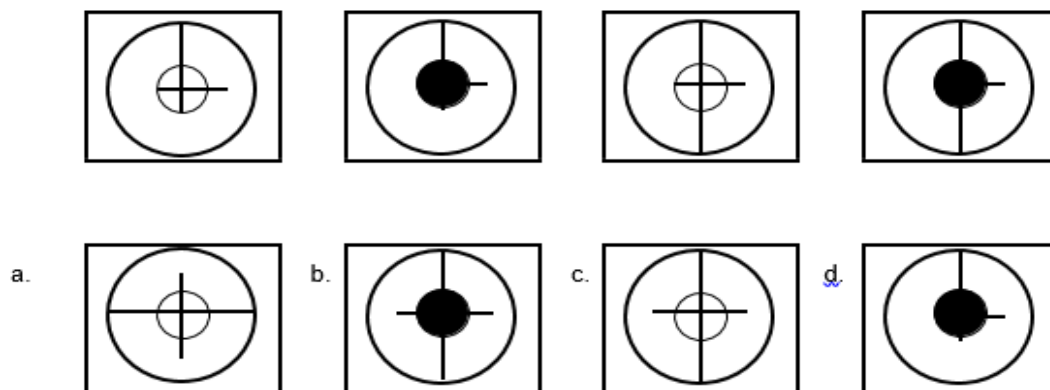
23. Word Meaning: Mark the word that does not belong to the same group as the others

- a. ineligible b. prohibited c. sanctioned d. excluded e. unsuitable

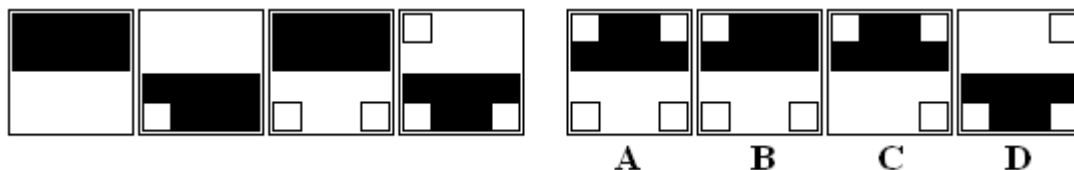
24. Abstract Reasoning: Which figure is the odd one out?



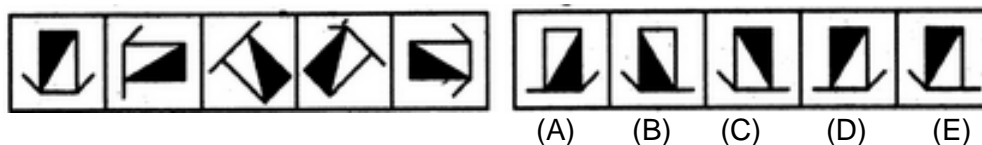
25. Abstract Reasoning: The first four figures follow one another according to a certain plan. Find what the plan is and then select the next one in the series.



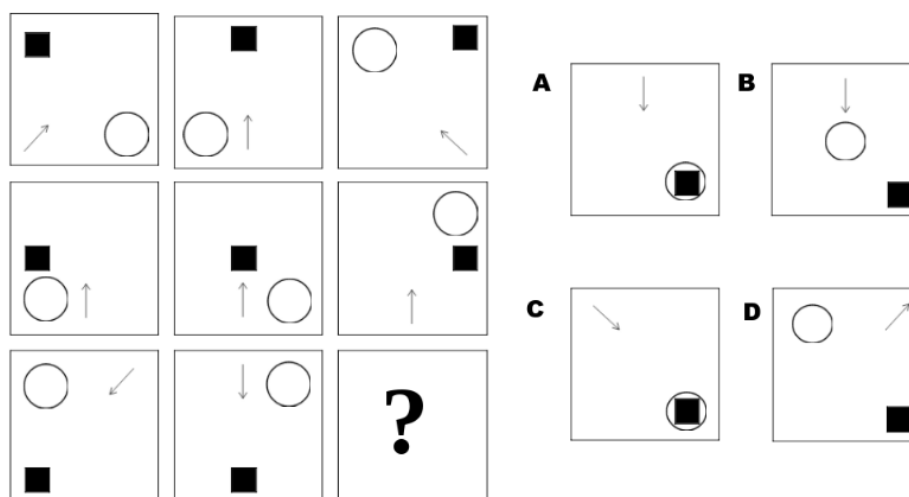
- 26. Abstract Reasoning:** The first four figures in the line follow one another according to a certain pattern. Find what the plan is and then select the next one in the series.



- 27. Abstract Reasoning:** The first five figures in each line follow one another according to a certain plan. Find what the plan is and then select the next one in the series.



- 28. Abstract Reasoning:** Which figure completes the series?



Mathematical Ability Test

This test measures your understanding of more advanced mathematical concepts relevant to technical trade training, such as algebra, geometry, and trigonometry, as well as more basic arithmetic (up to approximately year 11 – 12 level). For example:

1. If $3^x = 81$, what is the value of x ?
a. 9 b. 27 c. - 4 d. 4
2. What is the value of $.03 \times .50$?
a. 0.150 b. 0.015 c. 1.500 d. 0.530
3. An instrument store gives a 10% discount to all students off the original cost of an instrument. During a back to school sale an additional 15% is taken off the discounted price. Julie, a student at the local high school, purchases a flute for \$306. How much did it originally cost?
a. \$325 b. \$375 c. \$400 d. \$425
4. What is the value of 6^3 ?
a. 729 b. 180 c. 216 d. 18
5. If $3x = 6x - 15$ then $x + 8 =$?
a. 5 b. 10 c. 12 d. 13
6. Calculate the length of the side x , given that $\tan \theta = 0.4$



- a. 7 b. 6 c. 5 d. 8
7. If $x^2 - 3x + 1 = 0$, then the value of $x + \frac{1}{x}$ is:
a. 0 b. 1 c. 2 d. 3

Answers to Sample Questions

General Aptitude Test

1 b. 4

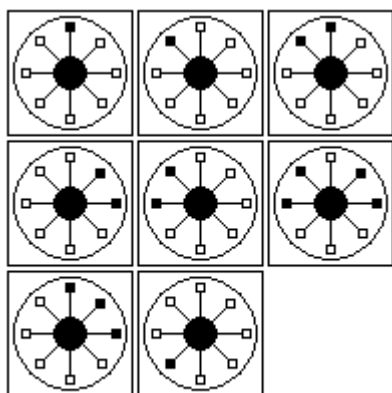
2 b. Since the numbers go up by 8 each time the next two numbers are 36 and 44. Therefore the correct answer is b.

3 b. 25, 36

4 b. ETEREAEEVEEL

5. c. Explanation: The first and second pattern in each row combine to form the third pattern in the row. Therefore the missing pattern is c.

1 + 2 = 3



6 a. 10

7 a. anarchy

8 c. 60 km

9 a. 129

10 d. initiation

11 d. 32

12. c. Explanation: The pin rotates 45° and 90° alternately and moves one space (each space is equal to half-a-side of the square). The arrow rotates 90° and 45° alternately and moves two spaces and one space. Therefore the next one in the series is c.

13a. 5km

14 b. wrist

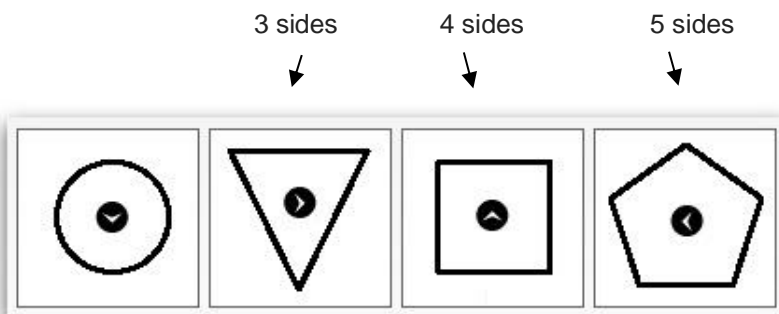
15 a. flower

16 d. 4

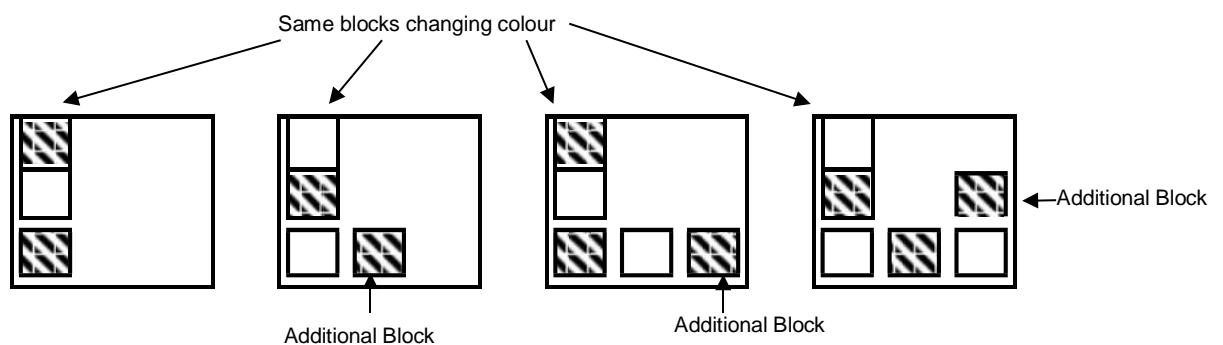
17 c. dry

18 b. 104

19 d. Explanation: There are two patterns to note when solving this question. The first is that the arrow in the middle of the shape is moving in a counter clockwise direction. The second is that the number of sides of the shape is increasing (see below). Therefore the next item in the series is D.



20 a. To solve this item, notice that there is one more block in every figure, reading from left to right. Further, every time a new block is added, it is added in an anti-clockwise direction running along the inside of the square. Also, every individual block alternates between shaded and blank. The only response following this series is a.

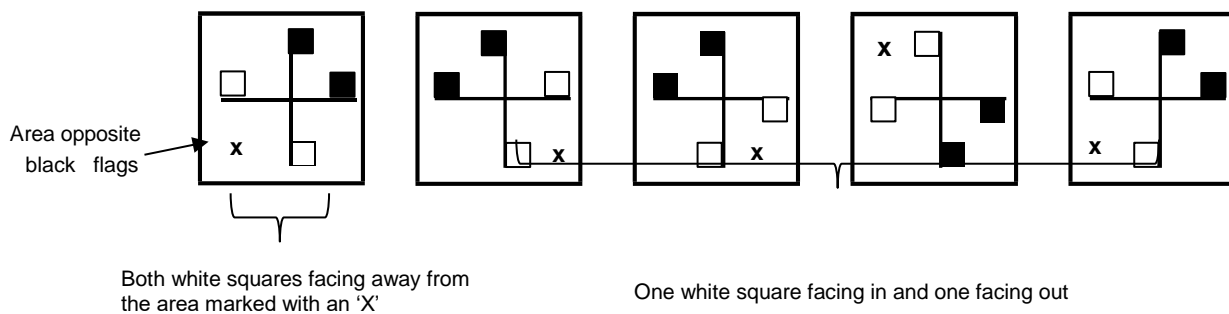


21 c. nomad

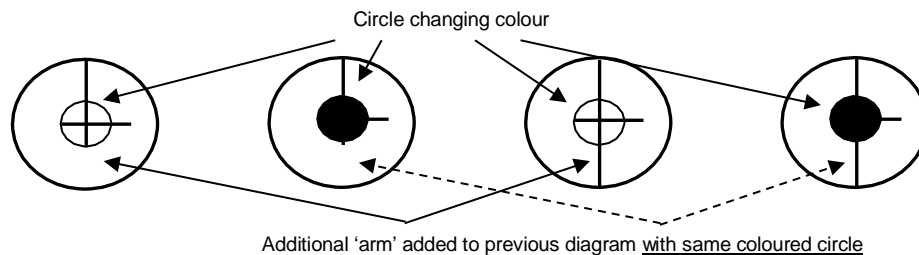
22 c. 1/6

23 c. sanctioned

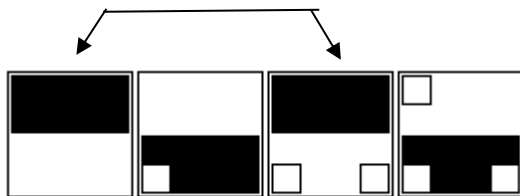
24 a. To solve this item, notice that all of the patterns have two black squares, or flags, at the end of two arms of the main cross. These black flags are always facing in towards each other. The position or area that these two black flags are in varies, but there is always two white flags positioned in the area (marked with an 'x') directly opposite. For all the patterns, one white flag faces into the area and one out, except for option a., where they both face out.



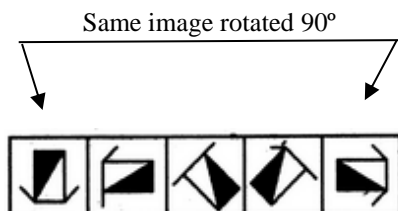
25c. To solve this item, notice that the centre circle alternates between blacked out and a cross hair. Further, every second instance of the pattern, a new arm is added running between the centre circle and the outside circle, in a clockwise direction. The next figure in the series is hence c.



26 a. Explanation: The black half is alternating (top to bottom) and a white square is being added to each box. Therefore the next in the pattern is a.



27 c. Explanation: Similar figure reappears in every fourth step and each time a figure reappears, it rotates through 90°



Therefore the next pattern in the series is c.

28 c. Explanation: This type of question requires you to look at the patterns in the squares and understand their relationship to one another, so as to identify the missing square. There are three rules to spot in this question. Firstly, there is a relatively positional rule: the position of the black square corresponds to the position its square holds within the diagram. Secondly, there is a movement rule, in that the circle moves around the boxes in a clockwise position. Finally, the arrows in the first and third columns are reflections of one another. The correct answer is therefore C.

Mathematical Ability Test

1. d. 4
2. b. 0.015
3. c. \$400
4. c. 216
5. d. as $x=5$
6. b. 6

Explanation: $\tan \theta = \frac{\text{opposite side}}{\text{adjacent side}}$

$$0.4 = \frac{x}{15}$$

$$x = 0.4 \times 15$$

$$= 6 \text{ cm}$$

7. d. 3

$$x^2 - 3x + 1 = 0 \Rightarrow x^2 + 1 = 3x$$

$$\Rightarrow \frac{x^2 + 1}{x} = 3$$

$$\Rightarrow x + \frac{1}{x} = 3$$