



***ON-CALL  
FIREFIGHTER  
PRACTICE  
BOOKLET***

 Official Lincolnshire Fire and Rescue

 @lincsfirerescue

[www.lincolnshire.gov.uk/lfr](http://www.lincolnshire.gov.uk/lfr)



# Introduction

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This booklet has been developed to help you prepare for the On-call Firefighter Ability Assessment which forms part of the selection process for firefighters.

We strongly recommend you set aside some time to read through this booklet and practice questions prior to your assessment day.

An On-call Firefighter has to be able to solve problems and understand information quickly and in pressurised situations. The assessment consists of 8 sets of questions, some of which involve numbers; others present written information of the type that you will find in the Fire and Rescue Service. Each set consists of a number of multiple choice questions. There are 30 questions in total.

More information about the format of the test and what they measure is given in the practice section. The test has been designed to be highly relevant to the work of firefighters. The test uses scenarios and questions that reflect the types of activities and decisions that firefighters may need to make on a routine basis. Whilst realistic and relevant to the firefighter role, no specific knowledge or experience of being a firefighter is required to complete the tests. You will not be at a disadvantage if you do not have this knowledge or experience.

The test is paper based and you will be given full instructions on how to complete it. An Administrator will also be present at the testing session and will guide you on each stage of the process.

To help you prepare, this booklet includes examples of the instructions as you will see them on the actual tests.

# Preparing for the Ability Assessment

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There are a number of things you can do to help you to take the assessment. We suggest you set aside some time to undertake the preparation described below:

## General Preparation

Ensure you are comfortable with the administrative arrangements that have been made for you, if you are not; raise any concerns with the Recruitment team.

In particular, check that you know:

- The date, time and location of the testing session (these will be detailed on your invitation letter)
- The time it will take you to get to the venue and the travel arrangements you need to make.

If you have any special requirements, please ensure that you have informed the Recruitment Team in plenty of time prior to the event, so that the necessary arrangements can be made.

The booklet contains practice questions for the Ability Assessment. These are examples of the sort of questions that you will be asked. Whilst they are not the actual questions that you will be presented with, they will nevertheless give you a realistic preview of what you will encounter during the actual assessment. You should complete these as part of your preparation.

Remember:

- These questions are for practice only – they are not the questions you will be asked during the real assessment.
- Have a go at each of the practice questions – this will help you become familiar with the process and format of the questions.
- You may try them as often as you like.
- Your results will not be collected or used by anyone – they are for your information only.

## The Day Before

- Try not to dwell on the assessment or become anxious about it – stay relaxed and keep yourself occupied.
- Get plenty of rest and get a good night's sleep.

## On The Day

- Allow plenty of time to get to the test venue – try and arrive at least 15 minutes early, as you will not be allowed to enter the test room if you arrive once testing has started.
- You do not need to bring paper, pencils, or any other equipment as everything you need will be provided for you. Please note, you will not be permitted to use calculators for the actual assessment.
- Wear comfortable clothing.
- Do not drink alcohol or take any strong medication prior to the assessment session.
- Make sure that you are physically comfortable before the test starts (visit the toilet, have a drink of water, make sure that you have eaten something etc.)

## During the Assessment

- The session will run for about 1 hour and will involve completing the test booklet.
- Ensure you can see and hear the Administrator and if not, tell them.
- Inform the Administrator of anything personally significant, for example, if you feel ill, are dizzy or have concerns before or during the test session.
- Listen carefully to the Administrator as they explain the assessment procedure.
- Any instructions you need will be read by the Administrator and will also be shown in your question booklet.
- Do not start the test until you have been instructed to do so, and you are clear about what you are doing.
- If at any time you are unsure about what you should be doing before the assessment begins – ask!

# How to use the question booklet and answer sheet

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During the assessment you will be given a question booklet and separate answer sheet. The first page of the booklet will contain information about the test and the instructions for completing it. Your Administrator will read the instructions aloud. Do not mark the question booklet as it will be used again.

## Answering the questions

When responding to the questions:

- You should only use the information provided to answer the questions.
- Choose the correct answer from the four answers given and record your answers on the separate answer sheet provided by putting a cross (X) in the box that corresponds to your response.

Example: A  B  C  D

- Always make sure that the number of the question that you are answering corresponds to the number on your answer sheet.
- If you make a mistake or change your mind, erase the mistake and ensure that your revised answer is clear.

Example: A  B  C  D

- Where two or more answers are given to a single question, no marks will be awarded.

Example: A  B  C  D

You will receive no marks even if the answer is A or C.

- If you are unsure of an answer, mark your best choice. You will not lose marks for an incorrect answer.
- Calculators are not permitted for the test, but rough paper will be provided to make any calculations needed.
- Work through the questions as quickly and accurately as you can.

# Practice Questions

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This section contains the instructions and practice questions to help you familiarise yourself with the Ability Assessment. The practice questions provided are realistic examples of the sorts of questions you will be asked but are not the actual questions you will see on the assessment day.

The assessment is a timed test that lasts one hour. The test includes both basic mathematical questions and also understanding information.

Firefighters need to be able to make basic mathematical calculations, for example, calculating how long an oxygen cylinder will last or how much hose is needed at a fire. You will be presented with a number of scenarios that will show numerical information in a variety of formats such as graphs and data tables. For each scenario you will be asked questions with multiple choice answers. On the day, you will not be allowed a calculator for the test but you will be provided with paper for your rough workings. To get maximum benefit from completing these practice questions, we suggest that you do not use a calculator.

The understanding information questions assess your ability to understand and interpret the type of written information that you may commonly come across as a firefighter. You will be presented with a number of scenarios, such as news articles or safety information. Each scenario is followed by a number of multiple choice questions that you should answer using the information contained in the scenario alone.

## Example Questions

There are a series of practice scenarios and questions on the following pages. These are provided for you to familiarise yourself with the style and content of the test and to practice the kinds of questions you will see in the action test. When you have completed the practice questions you can check your answers against those provided at the back of this booklet.

# Example 1 – General Operational Calculations

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- 1. A standard length of hose is 25 metres. How many lengths of hose would you need to reach 375 metres?**
  - a. 16
  - b. 15
  - c. 14
  - d. 13
  
- 2. An oxygen cylinder carries 2250 litres of oxygen. This oxygen is used at a rate of 30 litres per minute. How long will it take before the oxygen cylinder has used 450 litres of oxygen?**
  - a. 12 minutes
  - b. 13 minutes
  - c. 14 minutes
  - d. 15 minutes



# Example 2 – Arrival Times

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Use the information below to calculate the arrival times for various vehicles to an incident.

Appliance	Distance from Incident	Route Type
Pump 1	9 miles	A Roads
Pump 2	6 miles	B Roads
Pump 3	15 miles	Motorways
Pump 4	8 miles	A Roads

	A Roads	B Roads	Motorways
Pump	1 mile = 1 minute 15 seconds	1 mile = 1 minute 30 seconds	1 mile = 1 minute

3. Which appliance could arrive at the incident the fastest?

- a. Pump 1
- b. Pump 2
- c. Pump 3
- d. Pump 4

4. If you were to call Pump 2 to respond to the incident at 17:45hrs, at what time approximately would you expect it to arrive?

- a. 17:54hrs
- b. 17:55hrs
- c. 17:56hrs
- d. 17:57hrs

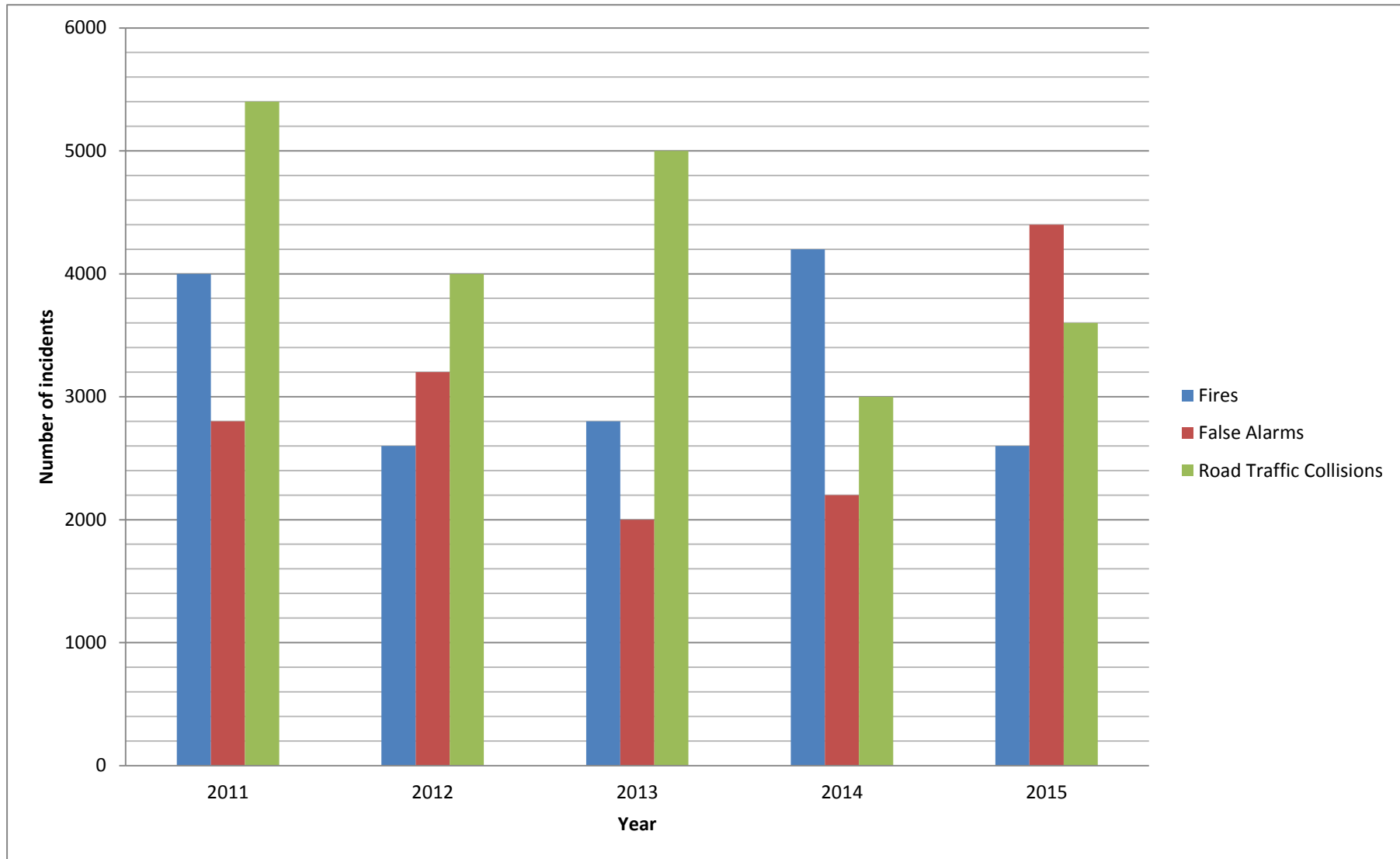
## Example 3 – Incident Data

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The table on the following page provides key information in relation to the number of incidents that have been attended for a period of 5 years. Use this information to answer the questions below.

- 5. Consider the information provided in the Bar Chart. Which one of the following statements is true?**
- a. In total, the Fire Service has attended more Fire calls than Road Traffic Collisions.
  - b. The number of incidents attended has decreased year on year since 2011.
  - c. In total, the Fire Service has attended more Fire calls than False Alarm calls.
  - d. The number of False Alarm incidents has remained static for the 5 year period.
- 6. What was the total number of False Alarm calls attended during 2014 and 2015?**
- a. 6500
  - b. 6600
  - c. 6700
  - d. 6800

### Total Number of Incidents attended



# Example 4 – Road Safety

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Firefighters are required to be able to digest and make sense of key information and use it to make accurate deductions. Read the information below carefully and answer the questions on the following page.

## National Road Safety Day

Lincolnshire Fire and Rescue will once again be highlighting key road safety messages this national Road Safety Day. Fire Crews will be engaged with members of the public at local venues and supermarkets to pass on some key messages including – *Only a Fool Breaks the 2 second rule*. The two second rule is a rule of thumb by which a driver may maintain a safe following distance at any speed. A recent *Break and Direct Line* survey discovered that 53% of those questioned admit breaking the 2 second rule on motorways. Crews will be speaking to members of the public giving free advice like this in order to make the roads a safer place for all.

Road Safety is high on the agenda for all Fire and Rescue Services. 25% of all Fire and Rescue Services' call outs are road traffic collisions. In 2014, there were 2194 road accidents involving personal injury recorded by the Lincolnshire Road Safety Partnership. These accidents resulted in 3113 casualties. Out of those casualties 398 were either killed or seriously injured. The age group where most killed and seriously injured occurred was 16-20 years (16%), closely followed by the 21-25 age groups (14.8%). 155 of these collisions took place in Lincolnshire on A Class roads, 72 collisions on B Class roads, 71 collisions on C Class roads, with 49 occurring on unclassified roads.

Lee Howell, President of the Chief Fire Officer's Association (CFOA) said, "I am delighted that CFOA is leading on this important road safety initiative. Despite the success over the recent years in reducing the number of RTCs, there is still an average of 5 deaths and 65 serious injuries on UK roads each day."

**7. According to the article, which of the following statements is true?**

- a. There is still an average of 5 deaths and 65 serious injuries on UK roads each day.
- b. According to a survey, 53% of people use the 2 second rule when driving on motorways.
- c. 5 people on average die per day due to Road Traffic Collisions in Lincolnshire.
- d. There were 3113 road traffic collisions in Lincolnshire in 2014.

**8. Which one of the following statements is false?**

- a. In 2014, the Road Safety Partnership recorded 2194 road accidents where someone was injured in Lincolnshire.
- b. In 2014, there were more casualties killed or seriously injured in the 16-20 age group than the 21-25 age group.
- c. There is still an average of 5 deaths and 65 serious injuries on UK roads each day.
- d. The total number of collisions occurring on B Class roads and C Class roads was more than those that took place on A Class roads.

# Example 5 – Incident Information

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The details presented below relate to an emergency call.

## Incident Facts

- Deliberate industrial unit fire.
- 999 call received at 14:18hrs.
- First pump arrived at the incident at 14:25hrs.
- Multiple vehicles are now in attendance.

## Resources in attendance

	Arrival Time at Incident
<b>Pump 1</b>	<b>14:25hrs</b>
<b>Pump 2</b>	<b>14:30hrs</b>
<b>Water Carrier</b>	<b>15:00hrs</b>
<b>Incident Commander</b>	<b>14:28hrs</b>

## Note

- Each pump has a crew of 5 and carries 1850 litres of water.
- The Water Carrier has a crew of 2 and carries 9000 litres of water.
- The Incident Commander is a senior member of the Fire Service who is trained to oversee the management of an incident.

**9. Based on the facts provided, how many Fire Service personnel were in attendance at the incident at 14:45hrs?**

- a. 10
- b. 11
- c. 13
- d. 16

**10. At 18:50hrs, all personnel and resources left the scene. How long had the Fire Service been at the incident?**

- a. 4 hours, 10 minutes
- b. 4 hours, 15 minutes
- c. 4 hours, 20 minutes
- d. 4 hours, 25 minutes

# Example 6 – Hoax Calls

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**Read the information below and answer the questions .**

Every year, the Fire and Rescue Services in England receive a significant number of hoax calls. These calls can have devastating consequences – they can cost lives!

The Fire Service is there to support those in genuine emergency situations. Hoax callers tie up valuable time and skills that should be focussed on real emergencies where lives may well be at risk. In an emergency situation, every second counts.

The consequences to public safety are significant, but what about the consequences to the person making these calls? Needless to say, hoax calls are illegal. There are penalties for anyone committing such an offence; this includes financial penalties of up to £5,000 or 6 months in prison.

The number of Hoax calls increases during school holidays but it's not always children who are to blame. Adults are often guilty of making these calls and it's often difficult to distinguish genuine callers from fakers. This means that firefighters are often sent to incidents which don't exist!

**11. According to the article, which of the following statements is true?**

- a. The Fire and Rescue Services in England have received hoax calls that have cost lives.
- b. It's the parents of the children making hoax calls who are to blame.
- c. The number of hoax calls increases outside of term time.
- d. Lincolnshire Fire and Rescue have received hoax calls that have cost lives.

**12. According to the article, which of the following statements is false?**

- a. Firefighters are often sent to incidents which don't exist.
- b. It is illegal to make hoax calls.
- c. There are more hoax calls outside of term times.
- d. Firefighters are trained to challenge the authenticity of suspicious calls.

# Example 7 – Breathing Apparatus

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Read the information below and answer the questions on the next page.

## PHYSIOLOGY OF BREATHING

### Elementary Physiology of the Respiration System

If respiration ceases either from an insufficiency of Oxygen in the atmosphere or from some physical cause, which makes breathing impossible, then life cannot be maintained. It is, therefore, necessary to know the composition of the atmosphere and the process of respiration itself. Oxygen may be regarded as the most important of all foods, for all the energy of the body; warmth and life itself is dependent on the oxidation of foodstuffs in the body tissues.

When at rest, the body requirements are comparatively low, and air is drawn into and out of the lungs by breathing movements at a rate of 16 to 18 times per minute. When more energy is exerted either through work or nervous excitement, the breathing rate is increased and may be as much as 30 times per minute or even more. At rest, about half a litre of air is normally inhaled at each breath and about the same quantity is exhaled. This amount is known as tidal air.

By taking a very deep breath, a further 2 litres, known as the inspiratory reserve volume, may be taken in, making a total of about 2.5 litres in all. On subsequent very deep exhalation, this may be increased by a further 1.5 litres, called the expiratory reserve volume and the total exhalation is 4 litres. The total amount thus exhaled is known as the vital capacity and varies with different people. This variation in lung capacity is the reason for variation in the demands on Breathing Apparatus for different wearers doing the same work.

### Composition of Air

Normal atmosphere, or air, which is drawn into the lungs, consists of three principal gases in the following proportion of volume: Nitrogen 79.04%, Oxygen 20.93% and Carbon Dioxide 0.03%. These three gases are readily separated. They are not combined with each other. Whenever air is inhaled, therefore, Nitrogen, Oxygen and traces of Carbon Dioxide are drawn into the body in these proportions. Nitrogen, this takes no active part in respiration, being merely an inert gas that passes in and out of the body practically unchanged. Carbon Dioxide, whilst this gas has a valuable function as a respiratory stimulant, it is actually produced by the process of respiration in greater quantities than is supplied by the atmosphere. Oxygen, this is the gas the body requires from the atmosphere to survive.



**13. According to the article, which of the following statements is false?**

- a. Approximately half a litre of air is inhaled and exhaled at each breath when a person is at rest.
- b. Nitrogen passes in and out the body practically unchanged.
- c. Nitrogen is a respiratory stimulant.
- d. When air is inhaled nitrogen, carbon dioxide and oxygen are not combined with each other.

**14. According to the article, which of the following statements is true?**

- a. Life can be maintained if respiration ceases from insufficient oxygen.
- b. When air is drawn into the body, the three principal gases are readily separated.
- c. Normal atmosphere contains more oxygen than nitrogen
- d. When at rest, approximately one litre of air is normally inhaled.

# Example 8 – Community Safety

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Lincolnshire Fire and Rescue is committed to reducing risk to all communities that it serves. As part of this, firefighters are involved in Community Safety activities to educate the public in how to stay safe.

You have been asked to ensure that there are sufficient leaflets available to support Community Safety work that has been arranged until the end of December.

## Key Information

- Each attendee at a Community Safety event gets an information leaflet.
- There are 83 leaflets left in the storeroom.
- Leaflets come in boxes of 350.
- Each box costs £55.

## Timetable of Community Safety Events for September to December

Month	Event	Number of Attendees
September	The Priory School 6 <sup>th</sup> form visit	23
	Public Safety Talk – WI meeting	35
October	Skegness Grammar School visit	375
	Young Offenders Awareness Event	12
November	Manor Leas year 7 visit	84
	Boston College visit	425
December	Fire Station Open Day	120
	Lincoln South Community Event	12,250

**15. What is the total number of people who will receive Community Safety information between the beginning of October and the end of November?**

- a. 796
- b. 886
- c. 896
- d. 996

**16. If you were asked to order 25 boxes of leaflets to add to what is left in the storeroom, how many leaflets would you have in total?**

- a. 8,833
- b. 8,750
- c. 8,733
- d. 8,633

# Answers to the Practice Questions

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1. Answer – B.  $375 / 25 = 15$
2. Answer – D.  $450 / 30 = 15$
3. Answer – B. Pump 2: 6 miles x 1 minute 30 seconds per mile = 9 minutes.
4. Answer – A. Pump 2 takes 9 minutes to attend and incident,  $1745\text{hrs} + 9 \text{ minutes} = 1754\text{hrs}$ .
5. Answer – C. In total the Fire Service attended 16,200 Fire Calls and 14,600 False Alarm Calls, therefore more Fire calls than False Alarm Calls.
6. Answer – B.  $2,200 + 4,400 = 6,600$  false alarm calls for 2014 and 2015.
7. Answer – A. “There are still an average of 5 deaths and 65 serious injuries on UK roads each day.”
8. Answer – D. “The total number of collisions occurring on B class roads and C class roads was more than those that took place on A Class roads.”
9. Answer – B. 2 pumps and 1 officer in attendance by 1445hrs. Each pump carries 5 personnel.  
 $2 \text{ pumps} \times 5 \text{ crew} = 10 + 1 \text{ officer} = 11 \text{ personnel total in attendance by } 1445\text{hrs}$ .
10. Answer – D. Fire Service arrives at 1425hrs and left at 1850hrs. Total time at incident = 4 hours 25 minutes.
11. Answer – C. “The number of hoax calls increases outside of term time.”
12. Answer – D. “Firefighters are trained to challenge the authenticity of suspicious calls.”
13. Answer – C. “Nitrogen is a respiratory stimulant.”
14. Answer – B. “When air is drawn into the body, the three principal gases are readily separated.”
15. Answer – C. October and November number of attendees:  $375 + 12 + 84 + 425 = 896$ .
16. Answer – A. Each box contains 350 leaflets:  $350 \times 25 \text{ boxes} = 8,750 + 83 \text{ leaflets left in the storeroom} = 8,833 \text{ total leaflets}$ .

# Frequently Asked Questions

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Some of the most frequently asked questions about the Ability Assessment and their answers are given below:

**Q1. What will happen at the event?**

A: On arrival at the assessment venue, you will be greeted by the Administrator. You will be at the event with a group of people, although during the assessment you will be working on your own. You will be provided with everything you need for the assessment.

The Administrator will explain the procedure for the assessment and will read standardised instructions to you for the assessment. This may sound very “formal” but the instructions need to be read the same way in each session to ensure fairness for all candidates.

The Administrator will tell you when to start the test and will remind you of the time limit for the test. There should be a visible clock in the room, but you are also advised to wear a reliable watch. Once the assessment begins, you will not be able to talk, ask for help or leave the room. Therefore, please ensure that you fully understand the process are physically comfortable and have asked any questions you need to before the assessment begins.

**Q2. Who will administer the assessment?**

A: Only fully trained people will be allowed to administer the test. Your Administrator will have completed this training.

**Q3. How is the test scored?**

A: You will get one mark for each correct response. Marks are not deducted for wrong answers. For each question, there is only one correct answer.

**Q4. Will I get feedback on my results?**

A: Yes. Following your test you will receive an email informing you of whether you have been successful at this stage of the process or not. If you have been unsuccessful, you will receive information on how you performed in each area and what this means in terms of your strengths and potential areas for development.

**Q5. Can I discuss my results with someone?**

A: Yes. If you have any questions or concerns about your results, please contact the recruitment team, who will be happy to assist you.

**Q6. Can I try again if I don't pass?**

A: Yes, you will be informed of the current process if this happens and when you will be able to re-take the assessment. The fact that you have done the assessment before will be known, but you will not be disadvantaged by this. You will be treated exactly the same as those people who have not applied before.