Basic Operations Firefighter

Office of the State Fire Marshal
Division of Personnel Standards and Education
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Springfield, IL  62703-4259

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Basic Operations Firefighter
The Office of the State Fire Marshal,
Division of Personnel Standards and Education

Would like to THANK the

Firefighter Ad Hoc Committee
For all their Hard Work, Outstanding Efforts and Performance

On the Development of the

Firefighter Program
Section 141.301 Basic Operations Firefighter

An Illinois Basic Operations Firefighter program meets or exceeds the level identified in NFPA 1001. Individuals may certify as Firefighter II for 5 years, at which time the certification will no longer be offered and the individuals will be required to successfully complete the additional course work if they desire to qualify for certification as a Basic Operations Firefighter.

a) Prerequisites

1) Successful completion of the Basic Operations Firefighter course.

2) Successful completion of a minimum of 180 instructional hours.

3) Passage of the State written examination (see Section 141.200).

4) Passage of the State practical skills examinations (see Section 141.200).

5) Engagement in fire fighting in an organized Illinois fire department as a fire protection person according to the Act, as attested to by the employing Fire Chief of the individual seeking certification.

6) Completion of the classroom portion for Vehicle Operator certification.


8) Certification requirements completed for Technical Rescue Awareness.

9) Required CPR/Basic First Aid. Training documentation shall be kept in fire department training files.

10) Required NIMS 100 and 700. Training documentation shall be kept in fire department training files.

11) Required completion of the Courage To Be Safe course. Training documentation shall be kept in fire department training files.
b) Fire department or individual reimbursement may be available for training costs for Basic Operations Firefighter (see Subpart E).

c) The Fire Service Instructor must meet the requirements of Section 141.115(c).

d) The course and facility must be approved by OSFM as provided in Sections 141.110 and 141.115.

e) Credit for equivalent courses may be available in accordance with Section 141.120.

f) Modular Training
   Basic Operations Firefighter training can be taken in a series of modules or as a complete course. The State written examination (see Section 141.200) can be taken by module or by taking the complete examination.

g) As a duty function, members shall be responsible for maintaining proficiency in their skills and knowledge, and to avail themselves of the professional development provided to the members through training and education programs.

(Source: Added at 34 Ill. Reg. 8297, effective June 8, 2010)


Reference Books

Jones and Bartlett – Fundamentals of Firefighting Skills
2nd Edition

International Fire Service Association – Essentials of Firefighting
5th Edition

Delmar, Cengage Learning – Firefighter’s Handbook Firefighter I and II
3rd Edition

Delmar, Cengage Learning – Firefighter’s Handbook Firefighting & Emergency Response
3rd Edition
Basic Operations Firefighter

Module A

Orientation / Organization
Fire Behavior
Building Construction
Safety
Communication
SCBA
Extinguishers
Ropes and Knots
Basic Operations Firefighter

Objectives

2-1 Fire Department Organization

2-1.1 Identify the organization of the fire department (5.1.1)

2-1.2 Identify the basic firefighter’s role as a member of the fire service (5.1.1)

2-1.3 Identify the mission of the fire service (5.1.1)

2-1.4 Identify the fire department documents that apply to the position of firefighter (5.1.1, 5.1.2)

2-1.5 Identify the function of Standard Operating Procedures / Guidelines (5.1.1)

2-1.6 Identify the components of a member assistance program (5.1.1)

2-1.7 Identify the role of other agencies as they relate to the fire department (5.1.1)

2-2 Fire Behavior

2-2.1 Define the following

A. Fire / Combustion  
B. Heat  
C. Ignition Temperature  
D. Flammable Limits / Flammable Range  
E. Vapor Density  
F. Solubility  
G. Flash Point  
H. BLEVE  
I. Oxygen (Oxidizing Agent)  
J. Oxidizer  
K. Oxidation  
L. Thermal Layering  
M. Pyrolysis  
N. Plume  
O. Endothermic Reaction  
P. Exothermic Reaction  
Q. Fire Triangle  
R. Fire Tetrahedron  
S. British Thermal Unit (BTU)  
T. Fahrenheit (°F)  
U. Celsius (°C)
V. Flameover (Rollover)
W. Flame Point (Fire Point)
X. Flashover
Y. Lower Flammable Limit (LFL)
Z. Smoke
AA. Upper Flammable Limit (UFL)

2-2.2 Identify the components of the Fire Triangle and the Fire Tetrahedron

2-2.3 Identify the relationship of the concentration of oxygen to combustibility and life safety (5.3.11A)

2-2.4 Identify the products of combustion commonly found in structure fires that create or indicate a hazard (5.3.5A, 5.3.11A)

2-2.5 Identify the potential consequences of exposure to products of combustion (5.3.1A)

2-2.6 Identify the following heat sources (5.3.12A)
   A. Chemical
   B. Electrical
   C. Mechanical
   D. Nuclear

2-2.7 Identify the methods of heat transfer (5.3.12A)

2-2.8 Identify the physical state of matter in which fuels are commonly found (5.3.10A)

2-2.9 Identify common fire conditions (5.3.11A)

2-2.10 Identify the process of thermal layering as it relates to a structure fire (5.3.12A)

2-2.11 Identify how to avoid disturbing thermal layering (5.3.12A)

2-2.12 Identify the development and prevention of a backdraft (5.3.11A)

2-3 Building Construction

2-3.1 Identify common structural components of buildings (5.3.10A, 5.3.12A)

2-3.2 Identify basic structural characteristics of the following types of building construction
   A. Fire Resistive (Type I)
   B. Non-Combustible (Type II)
   C. Ordinary (Type III)
   D. Heavy Timber (Type IV)
   E. Wood Frame (Type V)
2-3.3 Identify the methods of framing used in Type V construction

2-3.4 Identify construction features of roofs (5.3.12A)

2-3.5 Identify the components of a truss

2-3.6 Identify hazards associated with truss and lightweight construction (5.3.12A)

2-3.7 Identify dangerous conditions created by fire and fire suppression activities (5.3.10A, 5.3.12A)

2-3.8 Identify indicators of building collapse (5.3.12A, 6.3.2A)

2-3.9 Identify the effects of the fire on the building materials (5.3.10A, 5.3.12A)

2-3.10 Identify the different types of wall construction

2-3.11 Identify the types of loads as they apply to building construction

2-3.12 Identify the types of loads that can be imposed on a structure

2-3.13 Identify the different types of floor construction

2-4 Safety

2-4.1 Identify the importance of physical fitness and a healthy lifestyle to performance of the duties of a firefighter (5.1.1)

2-4.2 Identify the responsibilities of a fire department as required by NFPA 1500, Standard on Fire Department Occupational Safety and Health Program (5.1.1)

2-4.3 Identify the function of the personal protective equipment (PPE) (5.3.2A, 5.3.18A)

2-4.4 Identify the care, maintenance, and limitations of personal protective equipment (PPE) (5.1.1)(NFPA 1500, 5.1.8)

2-4.5 Identify the types of injuries that can occur in the following locations and their common causes (5.3.2A, 5.3.3A, 5.3.8A, 5.3.10A, 5.3.18A)

   A. Fireground
   B. Responding and Returning
   C. Training
   D. Other on-duty locations
   E. Non-fire emergencies

2-4.6 Identify the procedures for ensuring a safe station / facility environment (5.1.1) (NFPA 1500, Ch. 9)

2-4.7 Identify procedures for safely operating at emergency scenes (5.3)
2-4.8 Identify the hazards related to electric, gas and water emergencies and actions that can be taken to mitigate electric, gas, and water emergencies (5.3.18A, 5.3.3A)

2-4.9 Identify methods for shutting off utility services to a building (5.3.18A, 5.3.3A)

2-4.10 Identify safety equipment for riding on fire apparatus and its use (5.3.2A)

2-4.11 Identify safety procedures for mounting, dismounting, and operating on and around fire apparatus (5.3.2A)

2-4.12 Identify the safety principles and operation of fireground electrical power equipment (5.3.17A)

2-4.13 Identify the components of a firefighter rehabilitation system (5.1.1) (NFPA 1500, Ch. 8 & 9)

2-4.14 Identify the proper use of personal accountability system at an emergency incident (5.3.5A)

2-4 Safety Practical Objectives

2-4.15 The student shall demonstrate the proper use of seat belt / restraint (5.1.1, 5.3.2B, 5.3.3B)

2-4.16 The student shall demonstrate the proper mounting, dismounting, and operating on and around fire apparatus (5.3.3B)

2-4.17 The student shall demonstrate the proper technique of shutting off the following utility services (5.3.3B, 5.3.18B)

2-4.17.1 Gas Service

2-4.17.2 Water

2-4.17.3 Electric

2-4.18 The student shall demonstrate the proper safety principles and operation of the following tools (5.3.17B)

2-4.18.1 Generator

2-4.18.2 Lighting

2-4.18.3 Cords

2-4.18.4 Connectors

2-4.18.5 Ground Fault Circuit Interrupter (GFCI)

2-4.19 The student shall demonstrate the proper use of the accountability system at an emergency incident
2-4.20 The student shall demonstrate the donning of the following articles of PPE as part of an ensemble in less than 60 seconds (5.1.2)

2-4.20.1 Helmet (With face shield)
2-4.20.2 Hood
2-4.20.3 Boots
2-4.20.4 Gloves
2-4.20.5 Protective Coat
2-4.20.6 Protective Trousers

2-4.21 The student shall don the following articles of PPE (5.1.2)

2-4.21.1 PASS Devise (If not integrated in SCBA)
2-4.21.2 Eye Protection
2-4.21.3 Hearing Protection

2-4.22 The student shall demonstrate the proper doffing of the PPE ensemble and preparing it for reuse (5.1.2)

2-5 Communications

2-5.1 Identify the purpose and function of all alarm transmitting and receiving instruments and personnel alerting equipment provided to the department and its members (5.2.1A)

2-5.2 Identify the procedures to follow after receiving an alarm form dispatch or a report of an emergency from the public (5.2.1A, 5.2.2A)

2-5.3 Distinguish between mutual aid and automatic aid (5.2.1)

2-5.4 Identify the functions of the Mutual Aid Box Alarm System (MABAS) (5.2.1)

2-5.5 Identify fire department radio procedures (5.2.3A, 5.3.5A, 6.2.2A)

2-5.6 Identify fire department telephone procedures (5.2.2)

2-5 Communication Practical Objectives

2-5.7 The student shall demonstrate fire department emergency telephone procedures (5.2.2)

2-5.8 The student shall demonstrate fire department non-emergency telephone procedures (5.2.3B, 6.2.2B)
2-5.9 The student shall demonstrate the following prescribed fire department radio procedures: Routine traffic (5.2.2)

2-5.10 The student shall demonstrate the following prescribed fire department radio procedures: Emergency traffic (5.2.2)

2-5.11 The student shall demonstrate the following prescribed fire department radio procedures: Emergency mayday signal (5.2.2)

2-5.12 The student shall demonstrate the following prescribed fire department radio procedures: Emergency evacuation signal (5.2.2)

2-6 **Self Contained Breathing Apparatus (SCBA)**

2-6.1 Identify the development of the SCBA (5.3.1)

2-6.2 Identify the hazardous environments requiring the use of respiratory protection (5.3.1A)

2-6.3 Identify the physical requirements of the SCBA user (5.3.1A)

2-6.4 Identify the uses and limitations of SCBA (5.3.1A)

2-6.5 Identify the components, functions, and safety features of SCBA (5.3.1A)

2-6.6 Identify the inspection procedures to be used when wearing and working with SCBA (5.5.1A)

2-6.7 Identify safety procedures to be used when wearing and working with SCBA (5.3.9A)

2-6.8 Identify the emergency procedures to be used in the event of SCBA failure (5.3.1A)

2-6.9 Identify the methods of donning and doffing an SCBA while wearing personal protective equipment (5.3.1A)

2-6.10 Identify the techniques for exiting through a restricted opening (5.3.9B)

2-6.11 Identify the procedure for changing a low / empty SCBA cylinder (5.3.1B)

2-6.12 Identify the procedures for cleaning and sanitizing an SCBA (5.5.1A)

2-6.13 Identify the components and purpose of an SCBA fill system (5.5.1A)

2-6.14 Identify the operating principles of an SCBA refilling system (5.5.1A)
2-6 Self Contained Breathing Apparatus (SCBA) Practical Objectives

2-6.15 The student shall demonstrate the donning of SCBA while wearing full protective equipment in less than 60 seconds using the over the head method (5.3.1B)

2-6.16 The student shall demonstrate the donning of SCBA while wearing full protective equipment in less than 60 seconds using the regular coat method (5.3.1B)

2-6.17 The student shall demonstrate the donning of SCBA while wearing full protective equipment in less than 60 seconds using the seat mounted method (5.3.1B)

2-6.18 The student shall demonstrate the donning of SCBA while wearing full protective equipment in less than 60 seconds with face piece – face piece mounted regulator (5.3.1B)

2-6.19 The student shall demonstrate the doffing of SCBA and placing it in the ready position while wearing full protective equipment (5.3.1B)

2-6.20 The student shall demonstrate and document the cleaning and sanitizing of SCBA components (5.5.1B)

2-6.21 The student shall demonstrate the inspection procedures for the main components of SCBA (5.5.1B)

2-6.22 The student shall demonstrate the use of the SCBA in conditions of obscured visibility (5.3.5B, 5.3.9B)

2-6.23 The student shall demonstrate the following emergency procedures to be used in the event of SCBA failure: Use of emergency bypass or purge valve (5.3.1B)

2-6.24 The student shall demonstrate the following emergency procedures to be used in the event of SCBA failure: Conservation of air (5.3.1B)

2-6.25 The student shall demonstrate the following emergency procedures to be used in the event of SCBA failure: RIC / UAC (5.3.1B)

2-6.26 The student shall demonstrate techniques for maximizing the use of the air capacity of a SCBA under work conditions

2-6.27 The student shall demonstrate the use of SCBA in exiting through areas with restricted openings in emergency situations: Shifting (5.3.1B, 5.3.9B)

2-6.28 The student shall demonstrate the use of SCBA in exiting through areas with restricted openings in emergency situations: Dumping (5.3.1B, 5.3.9B)

2-6.29 The student shall demonstrate an air cylinder exchange while the SCBA is worn by a firefighter (5.3.1B)
The student shall demonstrate an air cylinder exchange while the SCBA is not worn by a firefighter (5.3.1B)

The student shall demonstrate the procedures for refilling SCBA cylinders from a Cascade System

The student shall demonstrate the procedures for refilling SCBA cylinders from a compressor / purifying system

2-7 Portable Fire Extinguishers

2-7.1 Identify the system used to classify fire extinguishers including symbols, pictures, and color-coding (5.3.16A)

2-7.2 Identify the portable extinguisher rating system (5.3.16A)

2-7.3 Identify the types of fire extinguishers (5.3.16A)

2-7.4 Identify common defects found during a visual inspection of fire extinguishers (5.3.16A)

2-7.5 Identify the appropriate extinguisher and its application technique for various classes of fire (5.3.16A)

2-7 Portable Fire Extinguishers Practical Objectives

2-7.6 The student shall demonstrate the extinguishment of the following classes of fires using the appropriate portable fire extinguisher: Class A (5.3.16B)

2-7.7 The student shall demonstrate the extinguishment of the following classes of fires using the appropriate portable fire extinguisher: Class B (5.3.16B)

2-8 Ropes and Knots

2-8.1 Identify the difference between life safety and utility rope (5.1.1)

2-8.2 Identify the following two categories of rope fibers

A. Natural
B. Synthetic

2-8.3 Identify the types of rope construction

2-8.4 Identify the reasons for placing rope out of service (5.1.1)

2-8.5 Identify the techniques for inspecting, cleaning, and maintaining rope (5.5.1)
2-8.6 Identify the proper method(s) of rope storage (5.5.1)

2-8.7 Identify knots and their uses (5.1.1)

2-8.8 Identify the techniques for using rope to tie ladders, hose, and other objects to hoist and / or secure them (5.1.1, 5.3.12B)

2-8 Ropes and Knots Practical Objectives

2-8.9 The student shall demonstrate tying the following knot: Bowline

2-8.10 The student shall demonstrate tying the following knot: Clove Hitch

2-8.11 The student shall demonstrate tying the following knot: Figure Eight on a Bight

2-8.12 The student shall demonstrate tying the following knot: Figure Eight Follow Through

2-8.13 The student shall demonstrate tying the following knot: Becket or Sheet Bend

2-8.14 The student shall demonstrate tying the following knot: Overhand Safety

2-8.15 The student shall demonstrate tying the following knot: Half Hitch

2-8.16 The student shall demonstrate tying the following knot: Handcuff Knot

2-8.17 The student shall demonstrate the proper technique for inspecting rope for: Chemical damage, cuts and abrasions, mildew and rot, internal damage, stretch and thermal damage

2-8.18 The student shall demonstrate proper cleaning and maintenance of the rope

2-8.19 The student shall demonstrate the appropriate method(s) of rope storage

2-8.20 The student shall demonstrate techniques for hoisting and / or securing ladders

2-8.21 The student shall demonstrate techniques for hoisting and / or securing a charged hose line

2-8.22 The student shall demonstrate techniques for hoisting and / or securing small equipment

2-8.23 The student shall demonstrate techniques for hoisting and / or securing forcible entry tools

2-8.24 The student shall demonstrate techniques for hoisting and / or securing fire extinguishers
2-8.25 The student shall demonstrate techniques for hoisting and / or securing uncharged attack lines
Basic Operations Firefighter

Module B

Ladders

Hose and Appliances

Nozzles / Streams

Water Supply

Forcible Entry

Ventilation
2-9  Ladders

2-9.1 Identify the primary materials used in the construction of ladders (5.3.6A)

2-9.2 Identify the components of a ladder (5.3.6A)

2-9.3 Identify techniques for safe ladder operations (5.3.6A)

2-9.4 Identify the types of ladders (5.3.6A)

2-9.5 Identify the use of common types of ladders (5.3.6A)

2-9.6 Identify the techniques for inspecting, cleaning, and maintaining ladders (5.5.1A)

2-9.7 Identify the selection process for using ladders (5.3.6A)

2-9.8 Identify the firefighter carries used to move ground ladders (5.3.6A)

2-9.9 Identify procedures for raising, lowering, and positioning of folding / attic ladders for rescue, ventilation, and hose deployment (5.3.6A, 5.3.12A)

2-9.10 Identify procedures for raising, lowering, and positioning of roof ladders for rescue and hose deployment (5.3.6A, 5.3.12A)

2-9.11 Identify procedures for raising, lowering, and positioning of extension ladders for rescue and hose deployment (5.3.6A, 5.3.12A)

2-9.12 Identify procedures for raising, lowering, and positioning of straight / wall ladders for rescue, ventilation, and hose deployment (5.3.6A, 5.3.12A)

2-9.13 Identify procedures for raising, lowering, and positioning of combination / A-Frame ladders for rescue and hose deployment (5.3.9)

2-9.14 Identify procedures for raising, lowering, and positioning of aerial devices / ladders for rescue, ventilation, and hose deployment (5.3.6A, 5.3.12A)

2-9.15 Identify the techniques for tying a halyard (5.3.6)

2-9.16 Identify safe ladder climbing techniques (5.3.6A)

2-9.17 Identify techniques for carrying hand tools while ascending and descending ladders (5.3.12B)

2-9.18 Identify techniques for safely working off ladders (5.3.9)
2-9.19 Demonstrate selecting the following ground ladder based upon a given situation (5.3.6B)

2-9.19.1 Folding, roof, straight

2-9.19.2 Extension, combination

2-9.20 Demonstrate the one firefighter from an apparatus carry (5.3.6B, 5.3.12B)

2-9.21 Demonstrate the one firefighter from the ground carry (5.3.6B, 5.3.12B)

2-9.22 Demonstrate the two firefighter method – low should carry from the flat racking (5.3.6B, 5.3.12B)

2-9.23 Demonstrate the two firefighter method – low shoulder carry from vertical racking (5.3.6B, 5.3.12B)

2-9.24 Demonstrate the two firefighter suitcase carry (5.3.6B, 5.3.12B)

2-9.25 Demonstrate the three fighter method – flat shoulder carry from the ground (5.3.6B, 5.3.12B)

2-9.26 Demonstrate the three firefighter arm’s length method – flat carry (5.3.6B, 5.3.12B)

2-9.27 Demonstrate the three firefighter suitcase carry (5.3.6B, 5.3.12B)

2-9.28 Demonstrate the four firefighter arm’s length – flat carry (5.3.6B, 5.3.12B)

2-9.29 Demonstrate the four firefighter flat shoulder carry (5.3.6B, 5.3.12B)

2-9.30 Demonstrate the roof ladder carry and raise (5.3.6B, 5.3.12B)

2-9.31 Demonstrate the one firefighter extension ladder raise (5.3.6B, 5.3.12B)

2-9.32 Demonstrate the two firefighter extension ladder raise (5.3.6B, 5.3.12)

2-9.33 Demonstrate the two firefighter extension ladder raise – TIP (5.3.6B, 5.3.12B)

2-9.34 Demonstrate the firefighter ladder beam raise – HEEL (5.3.6B, 5.3.12B)

2-9.35 Demonstrate the two firefighter ladder beam raise – TIP (5.3.6B, 5.3.12B)

2-9.36 Demonstrate the three firefighter extension ladder raise – TIP #1 (5.3.6B, 5.3.12)

2-9.37 Demonstrate the three firefighter extension ladder raise – TIP #2 (5.3.6B, 5.3.12B)
2-9.38 Demonstrate the three firefighter extension ladder raise – HEEL (5.3.6B, 5.3.12B)

2-9.39 Demonstrate the four firefighter extension ladder flat raise – HEEL #1 (5.3.6B, 5.3.12B)

2-9.40 Demonstrate the four firefighter extension ladder flat raise – HEEL #2 (5.3.6B, 5.3.12B)

2-9.41 Demonstrate climbing the full length of each type of ladder (5.3.6B, 5.3.12B)

2-9.44.1 Straight / Wall Ladder

2-9.44.2 Extension Ladder

2-9.44.3 Folding / Attic Ladder

2-9.44.4 Combination Ladder

2-9.42 Demonstrate raising and placement of a ladder for hoseline deployment (5.3.10B)

2-9.43 Demonstrate caring hand tools while ascending and descending a ladder (5.3.12B)

2-9.44 Demonstrate working off a ladder using appropriate safety devices and methods (5.3.6B, 5.3.12B)

2-9.45 Demonstrate raising and placement of a ladder for window ventilation operations (5.3.12B)

2-9.46 Demonstrate raising and placement of a ladder for flat roof ventilation operations (5.3.12B)

2-9.47 Demonstrating mounting and dismounting a ladder from and into a window (5.3.12B)

2-9.48 Demonstrate mounting and dismounting a ladder from and onto a roof (5.3.12B)

2-9.49 Demonstrate lowering an unconscious victim down a ladder (5.3.12B)

2-9.50 Demonstrate assisting a conscious victim down a ladder (5.3.12B)

2-9.51 Demonstrate the inspection procedure for ground ladders (5.5.1B)

2-9.52 Demonstrate the proper procedure for cleaning a ladder (5.5.1B)

2-9.53 Demonstrate maintenance procedures for different types of ground ladders (5.5.1)
2-10 Fire Hose and Appliances

2-10.1 Identify the construction features of fire hose

2-10.2 Identify the construction features of fire hose couplings

2-10.3 Identify the types and sizes of fire hose (5.3.10A)

2-10.4 Identify the procedure for inspecting, cleaning, and maintaining fire hose (5.5.2A)

2-10.5 Identify the types and prevention of fire hose damage (5.5.2)

2-10.6 Identify the procedure for inspecting, cleaning, and maintaining couplings (5.5.2A)

2-10.7 Identify the types and uses of hose rolls (5.5.2A)

2-10.8 Identify forward and reverse lays (5.3.15B)

2-10.9 Identify the techniques of couplings and uncoupling fire hose

2-10.10 Identify the techniques of moving hoselines into position

2-10.11 Identify types of hose loads (5.5.2A)

2-10.12 Identify the purpose and procedure of the Dutchman

2-10.13 Describe techniques of deploying hoselines (5.3.13B)

2-10.14 Identify the function of a hose clamp (5.3.15A)

2-10.15 Identify the techniques for lengthening and / or replacing a hoseline (5.3.15A)

2-10.16 Identify the appliances carried on a pumper as required by NFPA 1901, Standard for Pumper Fire Apparatus (NFPA 1901, 5.8.3)

2-10.17 Identify the techniques for advancing an uncharged attack line from a pumper (5.3.10A)

2-10.18 Identify the techniques for advancing a charged attack line from a pumper (5.3.10A)

2-10.19 Identify the technique for operating a charged attack line from a ladder (5.3.10B)

2-10.20 Identify the technique of carrying an attack line into a building, connecting it to a standpipe, and advancing the line from the standpipe (5.3.13A)

2-10.21 Identify the proper technique of connecting hoseline(s) from a pumper, to a Fire Department Connection (FDC)
2-10.22 Demonstrate the following types of hose rolls (5.5.2B)

2-10.22.1 Straight Roll
2-10.22.2 Donut Roll
2-10.22.3 Twin Donut Roll
2-10.22.4 Self-Locking Twin Donut Roll

2-10.23 Demonstrate the following coupling and uncoupling techniques (5.3.10B)

2-10.23.1 Single Firefighter Foot Tilt Method
2-10.23.2 Two Firefighter Method
2-10.23.3 Single Firefighter Knee Press Method
2-10.23.4 Two Firefighter Stiff Arm Method

2-10.24 Demonstrate the following methods to move hoselines into position (5.3.10B)

2-10.24.1 Hose Carry / Shoulder Load (Flat or Horseshoe)
2-10.24.2 Hose Carry / Shoulder Load (Flat or Accordion)
2-10.24.3 Hose Drag Method 1
2-10.24.4 Hose Drag Method 2

2-10.25 Demonstrate the loading and deployment of the following hose loads (5.5.2B)

2-10.25.1 Accordion Load
2-10.25.2 Horseshoe Load
2-10.25.3 Reverse Horseshoe Load
2-10.25.4 Flat Load
2-10.25.5 Minuteman Load
2-10.25.6 Triple Layer Load
2-10.25.7 Straight Finish
2-10.25.8 Dutchman

2-10.26 Demonstrate the function of a hose clamp
2-10.27 Demonstrate the techniques for lengthening a hoseline using the following equipment

2-10.27.1 Hose Clamp

2-10.27.2 Break – Apart Nozzle

2-10.28 Demonstrate the techniques for replacing a section of hose using the following methods (5.3.10B)

2-10.28.1 Kink Method

2-10.28.2 Clamp Method

2-10.29 Demonstrate the use of the following hose appliances (NFPA 1901, 5.8.3)

2-10.29.1 2 ½ inch Hydrant Valve

2-10.29.2 Double – Gated Reducing Leader Wye

2-10.29.3 Master Stream Device, 1000GPM Minimum

2-10.29.4 Foam Delivery Equipment

2-10.29.5 Double Male Adapter

2-10.29.6 Double Female Adapter

2-10.30 Demonstrate advancing a charged 1 ½ inch and 2 ½ inch attack line from a pumper as a member of a hose team (5.3.10B, 5.3.13B)

2-10.30.1 Into a structure at ground level

2-10.30.2 Up a ladder to a second floor landing

2-10.30.3 Up a stairway to an upper floor

2-10.30.4 Down a stairway to a lower floor

2-10.31 Demonstrate the operation of a charged attack line from a ground ladder (5.3.10B)

2-10.32 Demonstrate carrying an attack line into a building, connecting it to a standpipe and advancing the line from the standpipe (5.3.13B)

2-10.33 Demonstrate carrying an attack line into a structure (5.3.13B)

2-10.34 Demonstrate the procedures for cleaning and maintaining fire hose (5.5.2B)

2-10.35 Demonstrate the procedures for cleaning and maintaining couplings (5.5.2B)

2-10.36 Demonstrate connecting hoseline(s) from a fire pumper to a fire department connection (5.3.13B)
2-10.37 Demonstrate connecting a 3 inch or smaller hose to a hydrant (5.3.10B)

2-10.38 Demonstrate connecting a 4 ½ inch or larger soft sleeve intake hose to a hydrant (5.3.10B)

2-10.39 Demonstrate connecting a 4 ½ inch or larger hard intake hose to a hydrant (5.3.10B)

2-10.40 Demonstrate advancing a 1 ½ inch and 2 ½ inch attack line from a pumper as a member of a team: to an upper floor by hoisting (5.3.10B)

2-10.41 Demonstrate unloading non-preconnected wyed hoseline (5.3.10B)

2-10.42 Demonstrate unloading a pre-connected hoseline Flat Load (5.3.10B)

2-10.43 Demonstrate unloading pre-connected hoseline Minuteman (5.3.10B)

2-10.44 Demonstrate unloading pre-connected hoseline Triple Layer (5.3.10B)

2-10.45 Demonstrate hand lay 300 feet of supply line (2 ½ inch or larger) from a pumper to a water source (5.3.10B)

2-10.46 Demonstrate inspecting couplings for damage (5.3.10B)

2-11 Nozzles and Streams

2-11.1 Define fire stream (5.3.10A)

2-11.2 Identify the purpose of a fire stream (5.3.10A)

2-11.3 Identify the various uses of water as an extinguishing agent (5.3.10A)

2-11.4 Identify the types of fire stream nozzles (5.3.10A)

2-11.5 Identify the water flow / GPM of handlines and master streams (5.3.10A)

2-11.6 Identify the safe operation of fire stream nozzles (5.3.10A)

2-11.7 Define nozzle reaction (5.3.10A)

2-11.8 Define water hammer and techniques for its prevention (5.3.10B)

2-11.9 Identify observable results that are obtained when the proper application of a fire stream is accomplished (5.3.10A)

2-11.10 Identify methods of water application (5.3.10B)

2-11.11 Identify the use of various nozzles carried on fire apparatus (5.3.10A)

2-11.12 Identify the procedures for cleaning, maintaining, and inspecting nozzles
2-11.13 Identify the principles of both Class A and Class B foam as an extinguishing agent (6.3.1A)

2-11.14 Identify the methods by which foam prevents or controls a hazard (6.3.1A)

2-11.15 Identify the necessary equipment for the application of Class A and Class B foam (6.3.1A)

2-11.16 Identify the principle by which foam is generated (6.3.1A)

2-11.17 Identify the techniques of applying Class B foam (6.3.1A)

2-11.18 Identify common causes for poor foam generation and how to correct it (6.3.1A)

2-11.19 Identify the procedures for inspecting, cleaning, and maintaining foam appliances

2-11 Nozzles and Streams Practical Objectives

2-11.20 Demonstrate the following methods of water application (5.3.13B)

2-11.20.1 Direct

2-11.20.2 Indirect

2-11.20.3 Combination

2-11.21 Demonstrate the procedure of bleeding / purging air from a handline (5.3.10B)

2-11.22 Demonstrate the use of nozzles carried on a fire pumper (NFPA 1901, 3-8)

2-11.23 Demonstrate the procedure of opening and closing a nozzle

2-11.24 Demonstrate the procedure of adjusting the stream pattern on a fog nozzle (5.3.7B, 5.3.10B)

2-11.25 Demonstrate the procedure of adjusting the flow setting on an adjustable gallonage fog nozzle (5.3.7B, 5.3.10B)

2-11.26 Demonstrate the procedure of opening and closing a solid stream nozzle (5.3.10B)

2-11.27 Demonstrate the procedure of inspecting a nozzle

2-11.28 Demonstrate assembling the components needed to apply foam (6.3.1B)

2-11.29 Demonstrate the application techniques for Class B foam (6.3.1B)

2-11.30 Demonstrate the procedures for cleaning and maintaining foam nozzles
2-12 Water Supply

2-12.1 Identify the water sources and the components of a water distribution system in the local community (5.3.15A)

2-12.2 Identify the characteristics and operation of fire hydrants

2-12.3 Identify causes of increased resistance of friction loss in water distribution systems and hydrants (5.3.15A)

2-12.4 Identify the NFPA 291 standard coloring coding system used to identify hydrant flow (5.3.15A)

2-12.5 Identify conditions which may reduce hydrant effectiveness (5.3.15A)

2-12.6 Identify the procedures for establishing a water supply from a hydrant (5.3.15A)

2-12.7 Identify the techniques for hydrant to pumper connections for forward and reverse hose lays (5.3.15A)

2-12.8 Identify apparatus, equipment, and appliances required to provide water by relay pumping (5.3.15A)

2-12.9 Identify the techniques for the deployment of a portable water tank (5.3.15B)

2-12.10 Identify apparatus, equipment, and appliances required to provide water at rural locations via mobile water supply apparatus (tender) shuttle (5.3.15B)

2-12.11 Identify the techniques for loading and off-loading a mobile water supply apparatus (tender) (5.3.15A)

2-12.12 Identify the techniques for assembling the necessary equipment for drafting from a static water supply (5.3.15A)

2-12 Water Supply Practical Objectives

2-12.13 Demonstrate connecting a small intake hose to a hydrant and fully opening and closing the hydrant (5.3.15B)

2-12.14 Demonstrate the hydrant to pumper hose connections for forward lay (5.3.15B)

2-12.15 Demonstrate the hydrant to pumper hose connections for a reverse lay (5.3.15B)

2-12.16 Demonstrate as part of a team, the deployment of a portable water tank (5.3.15B)

2-12.17 Demonstrate assembling and connecting the equipment necessary for drafting from a static water supply (5.3.15B)
2-12.18 Demonstrate assembling and connecting the equipment necessary for the transfer of water between portable tanks using 2 ½ inch hose or larger (5.3.15B)

2-12.19 Demonstrate the proper procedure for making hydrant connections for a soft sleeve or large diameter hose

2-13 Forcible Entry

2-13.1 Identify the types of tools used for forcible entry (5.3.4)

2-13.2 Identify the techniques for cleaning, maintaining, and inspecting tools used for forcible entry (5.5.1A, 6.5.4A)

2-13.3 Identify the common door types (5.3.4A)

2-13.4 Identify materials used in door construction (5.3.4A)

2-13.5 Identify construction features of doors (5.3.4A)

2-13.6 Identify construction features of windows (5.3.4A)

2-13.7 Identify materials used in window construction (5.3.4A)

2-13.8 Identify materials used in wall construction (5.3.4A)

2-13.9 Identify construction features of walls, as it pertains to forcible entry (5.3.4A)

2-13.10 Identify the techniques used and hazards to consider when forcing entry through building components (5.3.4A)

2-13.11 Identify the operation of door locking devices

2-13.12 Identify the techniques of through-the-lock entry of doors / windows (5.3.4A)

2-13.13 Identify the techniques for gaining entry through security barriers (5.3.4A)

2-13.14 Identify the procedures for using a lock box / key box

2-13 Forcible Entry Practical Objectives

2-13.15 Demonstrate selecting and safely carrying the following tools (5.3.2B, 5.3.4B, 5.3.11B, 5.3.12B)

2-13.15.1 Cutting Tool

2-13.15.2 Prying Tool

2-13.15.3 Pushing / Pulling Tool
2-13.15.4 Striking Tool
2-13.15.5 Power Tools

2-13.16 Demonstrate forcing entry through each of the following (5.3.4B)
2-13.16.1 Door
2-13.16.2 Window
2-13.16.3 Wall
2-13.16.4 Security Barrier

2-13.17 Demonstrate the technique of the following specialized tools to assist or conduct forcible entry operations (5.3.4B)
2-13.17.1 Through the Lock Entry
2-13.17.2 K – Tool
2-13.17.3 A – Tool

2-13.18 Demonstrate the procedures for cleaning, maintaining and inspecting forcible entry tools (5.5.1B)
2-13.18.1 With wood and fiberglass handles
2-13.18.2 With plated surfaces, unprotected metal surfaces, axe heads, and power equipment

2-14 Ventilation
2-14.1 Define ventilation (5.3.11A)
2-14.2 Identify the principles of ventilation (5.3.11A)
2-14.3 Identify considerations for proper ventilation (5.3.11A)
2-14.4 Identify safety precautions to be taken while ventilating a structure (5.3.11A)
2-14.5 Identify the procedure of ventilation (5.3.11A, 5.3.12A)
2-14.6 Identify advantages and disadvantages of different types of ventilation (5.3.11A, 5.3.12A)
2-14.7 Identify the considerations for ventilating roofs of different types (5.3.12A)
2-14.8 Identify the signs of potential backdraft (5.3.11A)
2-14.9 Identify the types of tools used during ventilation (5.3.11)
Identify the techniques for cleaning and maintaining ventilation equipment (5.3.11)

Identify the factors used to determine roof integrity (5.3.12A)

Identify the techniques for removing existing roof openings

Identify the technique for opening windows from the inside and outside with or without tools (5.3.4A, 5.3.11B)

Identify the techniques for breaking window or door glass (5.3.11B)

Identify the stack effect (5.3.11A, 5.3.12A)

Identify the manual and automatic ventilation devices found within structures (5.3.11A)

Identify techniques for ventilating a lower grade (5.3.12B)

2-14   Ventilation Practical Objectives

Demonstrate ventilating various windows with the use of tools (5.3.11B)

Demonstrate breaking window glass and removing obstructions (5.3.11B)

Demonstrate the removal of existing roof openings (5.3.12B)

   2-14.20.1 Plate Glass

   2-14.20.2 Tempered Glass

Demonstrate mechanical ventilation (5.3.11B)

   2-14.21.1 Positive Pressure Fans

   2-14.21.2 Smoke Ejectors

   2-14.21.3 Hydraulic

Demonstrate determining the integrity of a roof system by sounding the roof with a tool (5.3.12B)

Demonstrate ventilating a flat roof using hand tools (5.3.12B)

Demonstrate ventilating a flat roof using power tools (5.3.12B)

Demonstrate ventilating a pitched roof using hand tools (5.3.12B)

Demonstrate ventilating a pitched roof using power tools (5.3.12B)
Basic Operations Firefighter

Module C

Search and Rescue

Fire Control

Loss Control

Protecting Evidence

Fire Detection, Alarm and Suppression Systems

Prevention / Public Education

Wildland / Ground Cover Firefighting

Firefighter Survival
2-15 Fire Ground Search and Rescue

2-15.1 Identify the tools and equipment to be carried while conducting a primary or secondary search operation (5.3.9A)

2-15.2 Identify techniques used for conducting a primary search (5.3.9)

2-15.3 Identify techniques used for conducting a secondary search (5.3.9A)

2-15.4 Identify techniques used for a large area search (5.3.9A)

2-15.5 Identify techniques for removing a victim from an immediate hazard (5.3.9A)

2-15.6 Identify techniques for moving a conscious victim up and down stairs (5.3.9A)

2-15.7 Identify techniques for moving a victim down a ladder (5.3.9A)

2-15 Fire Ground Search and Rescue Practical Objectives

2-15.8 Demonstrate primary search techniques (5.3.9B)

2-15.9 Demonstrate secondary search techniques (5.3.9B)

2-15.10 Demonstrate the removal of a fire victim from an immediate hazard through the use of the following carries (5.3.9B)

   2-15.10.1 Two – Person Extremity Carry

   2-15.10.2 Two – Person Seat Carry and Chair Carry

   2-15.10.3 Cradle in Arms Carry

2-15.11 Demonstrate the removal of a fire victim from an immediate hazard using the following drags (5.3.9B)

   2-15.11.1 Clothes, Firefighter, and Lift Drag

   2-15.11.2 Blanket Drag

   2-15.11.3 Webbing Sling Drag

2-15.12 Demonstrate raising and placement of a ladder for rescue operations from a window (5.3.9B)

2-15.13 Demonstrate moving a fire victim down a ladder (5.3.9B)
2-16 Fire Control

2-16.1 Identify the purpose and components of a size-up

2-16.2 Identify the considerations to be followed when advancing a hoseline to a fire (5.3.10A)

2-16.3 Identify the most common assignments for structural firefighting operations (5.3.10A)

2-16.4 Define offensive operations (5.3.8)

2-16.5 Define defensive operations (5.3.8)

2-16.6 Identify fire conditions that require the use of a master stream (5.3.8)

2-16.7 Identify the principals of exposure protection (5.3.10A)

2-16.8 Identify the techniques for extinguishing and / or controlling fires (5.3.7A, 5.3.8A)

2-16.9 Identify factors to consider when extinguishing Class C fires (5.3.16)

2-16 Fire Control Practical Objectives

2-16.10 Demonstrate fire extinguishment of exterior piles / stacks of Class A combustible materials (5.3.8B)

2-16.11 Demonstrate fire extinguishment of vehicle fires (5.3.7B)

2-16.12 Demonstrate fire extinguishment of exterior dumpster / trash bin fires (5.3.8B)

2-16.13 Demonstrate fire extinguishment of Class A combustible materials within a structure using a direct and indirect attack (5.3.10B)

2-16.14 Demonstrate fire extinguishment of Class A combustibles within a structure using a combination attack (5.3.10B)

2-16.15 Demonstrate fire extinguishment of hidden fires within a structure (5.3.10B, 5.3.13B)

2-16.16 Demonstrate fire extinguishment of an upper level fire via a ladder (5.3.10B)

2-16.17 Demonstrate fire extinguishment of an upper level fires via a stairwell

2-16.18 Demonstrate fire extinguishment of a below grade fire

2-16.19 Demonstrate fire extinguishment of a pressure container fire
2-17  Loss Control and Overhaul

2-17.1 Define salvage (5.3.14A)

2-17.2 Identify the benefits of salvage to the public as well as to the fire department (5.3.14A)

2-17.3 Identify selected salvage tools and equipment (5.3.14A)

2-17.4 Identify the construction and uses of the following (5.3.14A)

   A. Water Chute
   B. Catchall or Carryall

2-17.5 Identify the techniques for covering or closing a building’s openings; including doors, windows, floors, and roofs (5.3.14B)

2-17.6 Identify the construction of two folds and one roll used for salvage covers (5.3.14B)

2-17.7 Identify two methods of deploying salvage covers to protect property (5.3.14B)

2-17.8 Identify the proper procedures for inspecting, cleaning, and maintaining salvage covers (5.5.1A)

2-17.9 Identify alternate means for the removal of debris and the removal and routing of water from a structure (5.3.14B)

2-17.10 Define overhaul (5.3.13)

2-17.11 Identify the purposes of overhaul (5.3.13)

2-17.12 Identify common dangers associated with overhaul operations (5.3.13A)

2-17.13 Identify the common tools and equipment used in overhaul (5.3.13)

2-17.14 Identify the methods used to detect hidden fires (5.3.13A)

2-17.15 Identify the techniques to expose hidden fires by opening ceilings, walls, floors, and pulling apart burned materials (5.3.13A)

2-17.16 Identify the procedures to remove and relocate charred material to a safe location while protecting the area of origin for determination or cause (5.3.13B)

2-17  Loss Control Practical Objectives

2-17.17 Demonstrate the proper procedures for inspecting, cleaning, and maintaining salvage equipment (5.3.14B)
2-17.18 Demonstrate techniques of a one firefighter spread with a rolled salvage cover (5.3.14B)

2-17.19 Demonstrate techniques of deploying a one firefighter folded salvage cover (5.3.14B)

2-17.20 Demonstrate techniques of deploying a two firefighter folded salvage cover via a balloon throw (5.3.14B)

2-17.21 Demonstrate the construction and use of a water chute (5.3.14B)

2-17.22 Demonstrate the construction and use of a water catchall (5.3.14B)

2-17.23 Demonstrate techniques covering / closing a pitched roof (5.3.14B)

2-17.24 Demonstrate techniques covering / closing window and / or door openings (5.3.14B)

2-17.25 Demonstrate alternative means for the removal of debris and water from a structure (5.3.14B)

2-17.26 Demonstrate detecting hidden fires in ceilings, walls, and floors (5.3.13B)

2-17.27 Demonstrate pulling a ceiling (5.3.13B)

2-17.28 Demonstrate opening a wall and / or floor (5.3.13B)

2-17.29 Demonstrate removal and relocate charred material to a safe location while protecting the area of origin for determination of cause (5.3.13B)

2-18  Protecting Evidence for Origin and Cause Determination

2-18.1 Identify three factors that may cause a fire

2-18.2 Identify the responsibilities of the firefighter in relation to origin and cause determination (5.3.8A)

2-18.3 Identify the observations the firefighter should make while responding and working on a fire scene, in relation to origin and cause determination (5.3.8, 5.3.8A, 5.3.13A, 5.3.13B)

2-18.4 Identify the techniques to preserve fire cause evidence (5.3.13A, 5.3.13B)

2-18.5 Identify the role of the fire investigator

2-18.6 Identify the duties of firefighters assigned to a fire watch (5.3.13A)

2-18.7 Identify the legal considerations, at the fire scene, in relation to cause and determination
2-18  Protecting Evidence Practical Objectives

2-18.8 Demonstrate techniques for preserving signs of area of origin and arson for determination or cause (5.3.13B)

2-19  Fire Detection, Alarm and Suppression Systems

2-19.1 Identify the basic types of fire detection systems
2-19.2 Identify the types of sprinkler systems
2-19.3 Identify the location and appearance of sprinkler system valves
2-19.4 Identify the main control valve on an automatic sprinkler system (5.3.14A)
2-19.5 Identify the dangers of closing the sprinkler system main control valve prematurely
2-19.6 Identify a Fire Department Connection (FDC) (5.3.14A)
2-19.7 Identify how the automatic sprinkler head activates and releases water (5.3.14A)
2-19.8 Identify how to stop the flow of water from a sprinkler system (5.3.14A)
2-19.9 Identify the valve of automatic sprinklers in providing safety to the occupants of a structure (5.3.14A)

2-19  Fire Detection, Alarm and Suppression Systems Practical Objectives

2-19.10 Demonstrate techniques for stopping the flow of water from a sprinkler head using wedges and/or stoppers (5.3.14B)
2-19.11 Demonstrate operating the main control valve (5.3.14B)

2-20  Fire Prevention and Public Education

2-20.1 Identify the basic firefighter’s role in fire prevention and public education (5.5.2A)
2-20.2 Identify how to present a prepared public education program (5.5.2A)
2-20.3 Identify residential smoke and carbon monoxide detector placement and maintenance (Required by Illinois State Law)

2-21  Wildland / Groundcover Firefighting
2-21.1 Define wildland fire (5.3.19A)
2-21.2 Define wildland / urban interface (5.3.19A)
2-21.3 Identify factors affecting wildland fires (5.3.19A)
2-21.4 Identify the types of ground cover fires (5.3.19A)
2-21.5 Identify the parts of ground cover fires (5.3.19A)
2-21.6 Identify the methods to contain or suppress a ground cover fire (5.3.19A)
2-21.7 Identify the safety principles and practices while attacking a ground cover fire (5.3.19A)
2-21.8 Identify exposure threats based on ground fire spread potential (5.3.19A)
2-21.9 Identify techniques for protecting exposures at a ground cover fire (5.3.19A)
2-21.10 Identify how to construct a fire line at a ground cover fire (5.3.19A)
2-21.11 Identify how to extinguish a ground fire with hand tools (5.3.19A)
2-21.12 Identify how to maintain integrity of an established fire line (5.3.19A)
2-21.13 Identify how to suppress a ground cover fire with water (5.3.19A)

2-21 Wildland / Groundcover Firefighting Practical Objective

2-21.14 Demonstrate the techniques for extinguishing or controlling a ground cover fire / wildland fire while working as a member of a team (5.3.19B)
2-21.15 Demonstrate techniques for protecting exposures at a ground cover fire (5.3.19B)
2-21.16 Demonstrate how to construct a fire line at a ground cover fire (5.3.19B)
2-21.17 Demonstrate how to extinguish a ground fire with hand tools (5.3.19B)
2-21.18 Demonstrate how to suppress a ground cover fire with water (5.3.19B)

2-22 Firefighter Survival

2-22.1 Identify concepts that improve survivability for firefighters (A5.3.9)
2-22.2 Identify the concepts of situational awareness (A5.3.9)
2-22.3 Identify the concepts of risk / benefit analysis (5.1.1 & NFPA 1500, A4.2.3)
2-22.4 Identify the principles of air management (A5.3.9)
2-22.5 Identify the techniques for exiting a building during deteriorating conditions (A5.3.9)

2-22.6 Identify the roles and responsibilities of a Rapid Intervention Crew (RIC) (5.1.1, NFPA 1500 8.8)

2-22.7 Define critical incident stress (5.1.1)

2-22.8 Identify information resources that document events and circumstances that typically led to injury and or death of firefighters

### 2-22 Firefighter Survival Practical Objectives

2-22.9 Demonstrate performing a risk / benefit analysis for victim survivability and firefighter risk in a fire building (5.5.13B)

2-22.10 Demonstrate techniques for identifying the nearest exit in a hostile environment (5.5.13B)

2-22.11 Demonstrate techniques for following a hoseline out of a hostile environment (5.5.13B)

2-22.12 Demonstrate techniques for activating a PASS alarm in a hostile environment (5.5.13B)

2-22.13 Demonstrate techniques for notifying incident command while disoriented in a hostile environment (5.5.13B)

2-22.14 Demonstrate taking refuge in a safe haven (5.5.13B)

2-22.15 Demonstrate rescue procedures for the following without compromising the rescuer’s respiratory protection (5.3.9B)

   2-22.15.1 A firefighter with functioning respiratory protection

   2-22.15.2 A firefighter without functioning respiratory protection

2-22.16 Demonstrate the techniques for exiting through a restricted opening (5.3.9B)