

# Merit Badge

# Orienteering

## Workbook



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*Scout's Name & Troop*

*“Orienteering, the use of map and compass to find locations and plan a journey, has been a vital skill for humans for thousands of years. Orienteering is also a recognized sport at the Olympic Games, and thousands of people participate in the sport each year in local clubs and competitions.”*

# NEOOC

# Merit Badge Completion Check Sheet

Mark when each part of the Merit Badge requirements are completed, and have a Merit Badge Counselor sign off on each part. Some of the requirements can be completed by using this workbook, and some will need to be completed in the field.

INDEX	TOPIC	COMPLETE DATE	MBC Signoff
1	First Aid		
2	Orienteering		
3A	Compass		
3B	Compass Bearing		
4A	Topographic Map		
4B	Symbols		
4C	Declination		
4D	North/South Lines		
4E	Measure Distance		
4F	Map Orientation		
5	Pace Course		
6A	Control Symbols		
6B	Clue Sheet		
6C	Orienteering Strategies		
7A	Events (3)		
7B	Event Reports (3)		
8A	XC Course Design		
8B	Score Course Design		
9	Volunteer / Official		
10	Teach		

*Scout's Name:* \_\_\_\_\_

*Troop:* \_\_\_\_\_ *Date Completed:* \_\_\_\_\_

*Troop Leader:* \_\_\_\_\_

1. *Show that you know first aid for the types of injuries that could occur while orienteering, including cuts, scratches, blisters, snakebite, insect stings, tick bites, heat and cold reactions (sunburn, heatstroke, heat exhaustion, hypothermia), and dehydration. Explain to your counselor why you should be able to identify poisonous plants and poisonous animals that are found in your area.*

**Describe the basic first aid measures for the following injuries that may occur while orienteering. In addition, what can you do to prevent many of these injuries in the first place?**

Injury Type	First Aid Measures & Preventative Measures
Cuts & Scratches	
Blisters	
Snakebite(s)	
Insect Stings	

<b>Injury Type</b>	<b>First Aid Measures &amp; Preventative Measures</b>
<b>Tick Bites</b>	
<b>Sunburn</b>	
<b>Heatstroke</b>	
<b>Heat Exhaustion</b>	
<b>Hypothermia</b>	
<b>Dehydration</b>	

**Explain to your counselor why you should be able to identify poisonous plants and poisonous animals that are found in your area, and describe below some of the most common poisonous plants and trees, and poisonous or venomous animals that commonly appear in your area.**

<b>Item</b>	<b>Describe and Identify the Plant or Animal</b>
<b>Poisonous Plants</b>	
<b>Poisonous or Venomous Animals</b>	

2. *Explain what orienteering is.*

**Describe what the sport of orienteering entails, how it's different from cross-country running or hiking in the woods, and some sport specifics, like special gear needed, types of orienteering events, etc.**

About Orienteering (*write your answer below*)

3. Do the following:

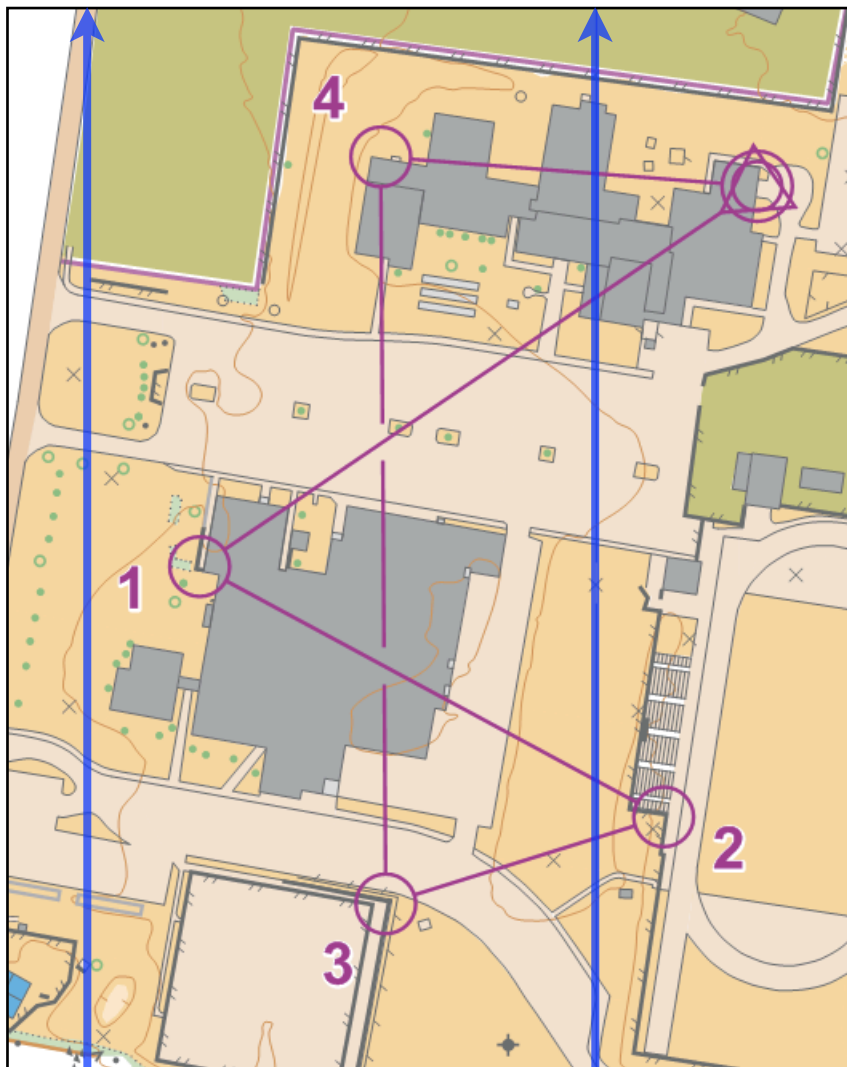
- a) Explain how a compass works. Describe the features of an orienteering compass.
- b) In the field, show how to take a compass bearing and follow it.

**In the space below, explain how a compass works. Label each part of the compass. Include labels for scales / ruler, direction of travel, orienting arrow, declination scale, main dial, index line, magnetic needle, orienting lines, rotating housing, and base plate. Describe, where appropriate, what each part does.**



Use the sample map below for the following exercises. Assume the blue arrows point north, and use that for your problem sets. Write your answers in the blank space provided between each question.

1. You want to go from the start to control # 1. What direction, in degrees on the compass, is that?
2. What is the direction, in cardinal terms, from control #3 to control #4? What about from control #2 to #4?
3. You travel from control #4 to the finish - what direction, in degrees on the compass, is that?



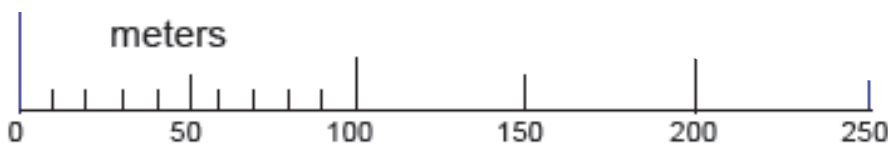
Use your compass to measure distance using the scale provided.

How far is it, in meters, from the start to control #1?

How far is it from control #1 to control #2?

What is the total distance of this orienteering course, as measured on the map?

How much more might you actually travel, assuming you can't pass through the buildings?



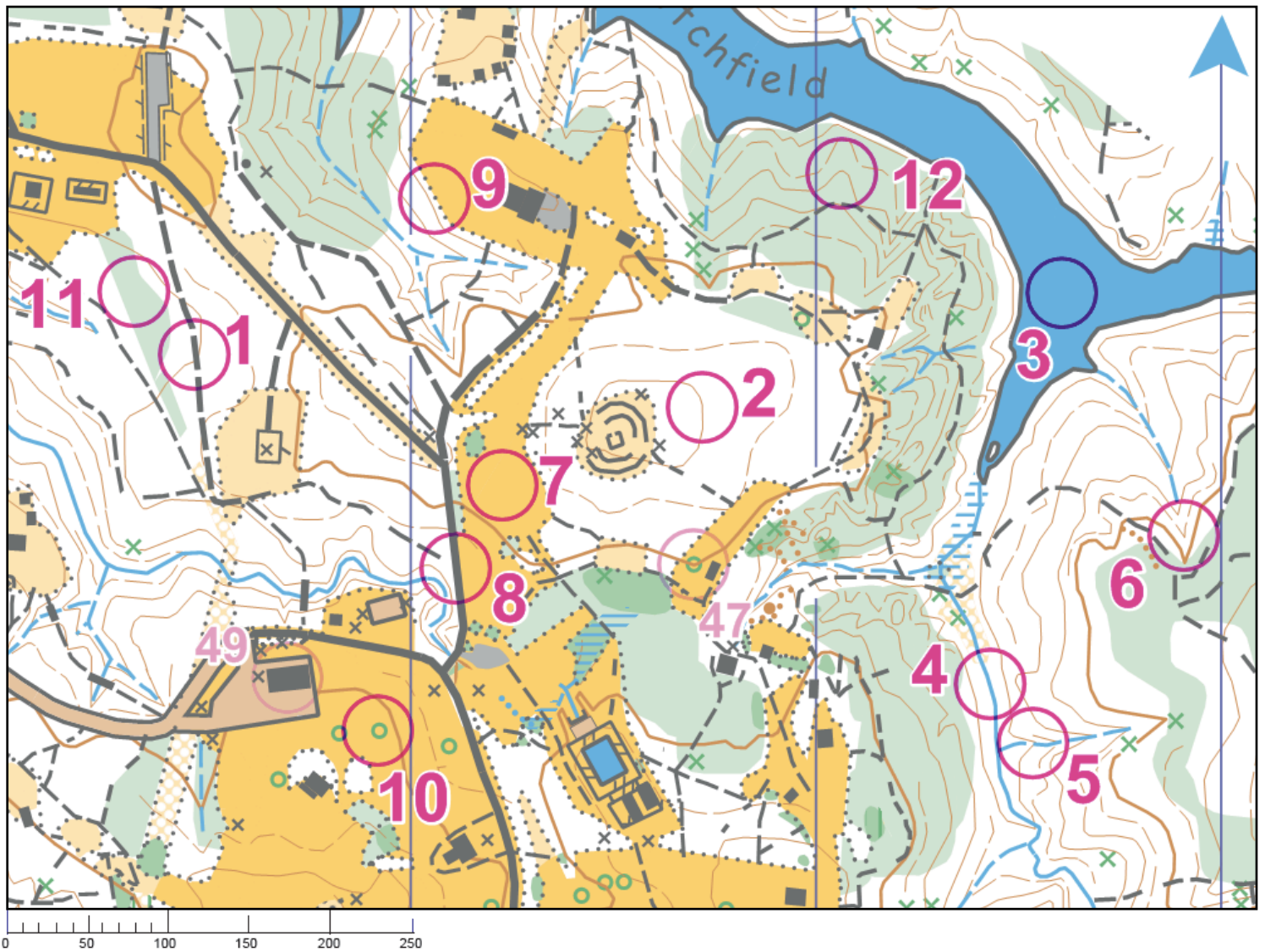


4. Do the following:

- a. Explain how a topographic map shows terrain features. Point out and name five terrain features on a map and in the field.
- b. Point out and name 10 symbols on a topographic map.
- c. Explain the meaning of declination. Tell why you must consider declination when using map and compass together.
- d. Show a topographic map with magnetic north-south lines.
- e. Show how to measure distances on a map using an orienteering compass.
- f. Show how to orient a map using a compass.

**How does a topographic map work? How does it show terrain features?**

Identify the marked topographical features. Sometimes there might be more than one right answer - identify as many as you can.



Identify the shown Topographical Features on the Map

1		7	
2		8	
3		9	
4		10	
5		11	
6		12	

**What is declination, and why is it important to know about? Give an example.**

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**In the map above, measure the distances between controls, and record them below.  
(the scale shown is in meters)**

<b>From 1 - 2</b>	
<b>From 5 - 6</b>	
<b>From 9 - 10</b>	
<b>From 2 - 6</b>	
<b>Total course length, from 1 - 12</b>	

**Describe how you would orient the map above to north, using a standard compass.**

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5. *Set up a 100-meter pace course. Determine your walking and running pace for 100 meters. Tell why it is important to pace-count.*

<b>What is your pace count on a flat track surface, while walking, for 100m?</b>

<b>What is your pace count in the woods, while walking, for 100m?</b>

<b>What is your pace count in the woods, while jogging, for 100m?</b>

<b>Rework some of the distance sets from above. How many paces would it take you to go from controls on the map? Note what controls you're using, and calculate the number of paces.</b>

6. Do the following:

- Identify 20 international control description symbols. Tell the meaning of each symbol.
- Show a control description sheet and explain the information provided.
- Explain the following terms and tell when you would use them: attack point, collecting feature, catching feature, aiming off, contouring, reading ahead, handrail, relocation, rough versus fine orienteering.

Common Control Symbols						
YELLOW			20 controls			
1	31					
2	32					
3	33					
4	34					
5	35					
6	36					
7	37					
8	38					
9	39					

10	40					
11	41					
12	42					
13	43					
14	44					
15	45					
16	46					
17	47					
18	48					
19	49					
20	50					

Identify the symbols, and their combinations, above. (esp. column 4)			
1		11	
2		12	
3		13	
4		14	
5		15	
6		16	
7		17	
8		18	
9		19	
10		20	

**Identify the following orienteering strategies, when to use them, and why they're beneficial.**

**attack point**

**collecting feature**

**catching feature**

**aiming off**

**contouring**

**reading ahead**

**handrail**

**relocation**

**rough vs. fine**