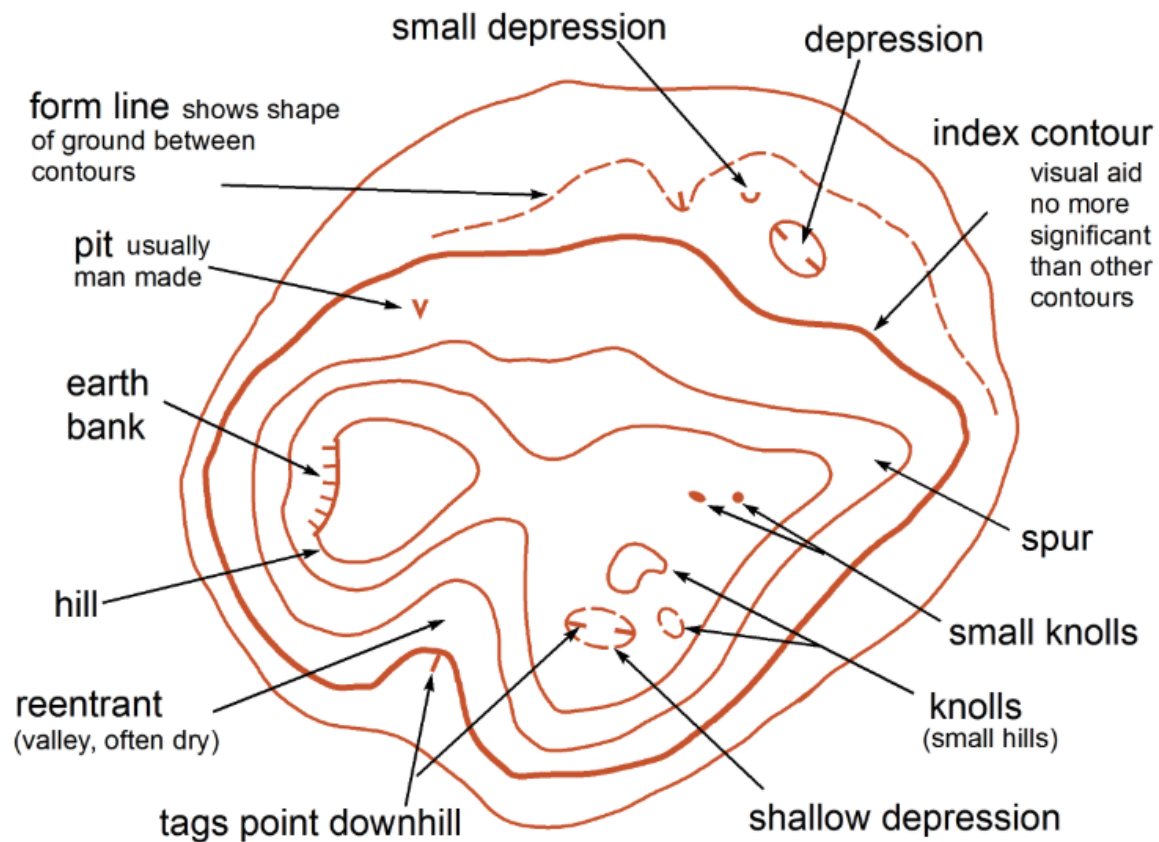


Introduction to contours

Brown = land forms



The image above demonstrates the different types of contour features you're likely to find on an orienteering map. It's important to be familiar with these features. Contours will tell you:

- Whether you can expect the terrain to slope up or down
- How steep the up/down will be

On forest maps, you will use mainly contour features to help you navigate through the terrain.

The exercise

This exercise can be done with a partner or on your own. You may also be able to ask one of our trainers to walk this exercise with you! There is a purple line marked on the map, which will take you around the map past a number of different contour features. First, spend a few minutes sitting at the start/finish area looking at the contour features around the purple line and see if you can figure out in which direction the terrain will slope. Then walk along, roughly following the purple line, and take note of where the terrain slopes, and how each of the contour features are represented in the terrain.

Orient your map and taking a bearing

In orienteering, your compass has one main purpose – to tell you where North is! Most orienteers don't rotate their compass bezel, nor do they think about declination. Your main tool for wayfinding is your map; the compass merely helps you make sure your map is correctly oriented!

In forested terrain, you may need to take a keep on a bearing between controls. This will help you ensure that you're pointing in the right direction, and also that you don't end up making a parallel error (one where you end up following a similar feature, such as a spur, in the wrong direction!)

To orient your map

1. Hold your map in your preferred hand, in front of you around belly button height, aligned in the direction you want to go.
2. Place your compass on the map along the direction you want to go.
3. Rotate your entire body so the north line on the compass aligns with the north line on the map. Don't just rotate the map/compass!
4. Now begin to move along your chosen route to the control

If you need to take a bearing

1. Hold your map in your preferred hand, in front of you around belly button height, aligned in the direction you want to go.
2. Place your compass on the map along the direction you want to go.
3. Rotate your entire body so the north line on the compass aligns with the north line on the map. Don't just rotate the map/compass!
4. Look up and find a feature in the terrain along the direction that you want to go, such as a tree, and go to that object. Repeat until you find your control.

The exercise

Find a partner of similar speed to you. Choose who will be partner A and partner B. You will get 2 maps; one will be blank with just control points marked and the other will be a full course map with controls. Partner A takes the blank map and navigates on a bearing from the start to control #1. Partner B follows along to make sure you don't get too far off line. Switch maps/roles at each control. Make sure you orient your map, take your bearing and move carefully through the terrain.

Attackpoints

An attack point is the closest feature to the control that you know you can find and from which you can then find the harder-to-locate control. This is a vital technique to master in orienteering.

You must be able to clearly identify the attack point on the map and on the terrain. Because the attack point is something you know without any doubt that you personally can find, it may not be the same for everyone.

It is the last thing you expect to locate before your final approach to your destination.

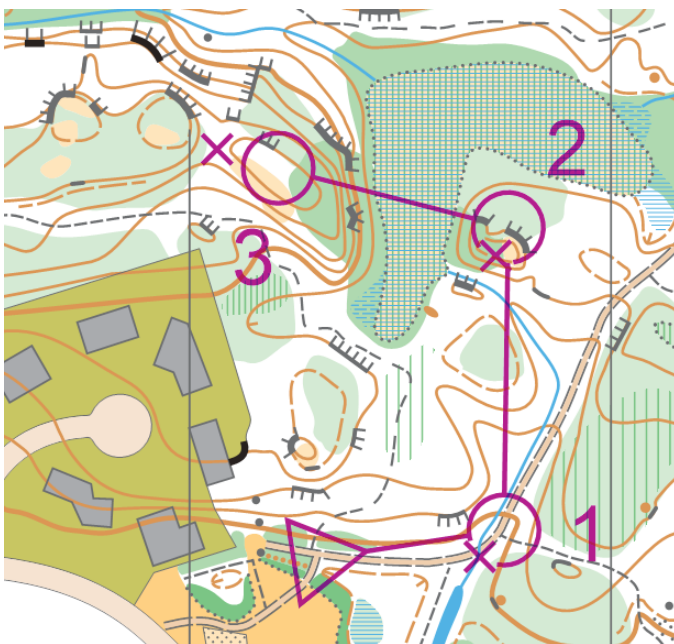
Every leg of the course has an attack point. On a short leg, it may be that you will make your final approach from your current control, in which case the control you are leaving has become your attack point. On a longer leg, you may aim for an intermediate destination such as the edge of a pond.

What are some attributes of good attack points?

1. They have to be easier to find than the control itself.
2. They should not take you too far out of the way.
3. They should be quicker to locate than the control.
4. They must be readily identifiable.
5. When you reach the attack point, you must know you are there.

Note that you don't actually have to visit the attackpoint in the terrain – it could be that you're passing by the feature. Don't think that you have to physically touch the attackpoint for it to be a valuable!

Example



Control #1 is on a trail/path intersection. You could use the trail/stream intersection as an attackpoint.

Control #2 on the west side of the cliff. You could use the hill as an attackpoint.

Control #3 is on top of a hill. You could use the saddle as an attackpoint.

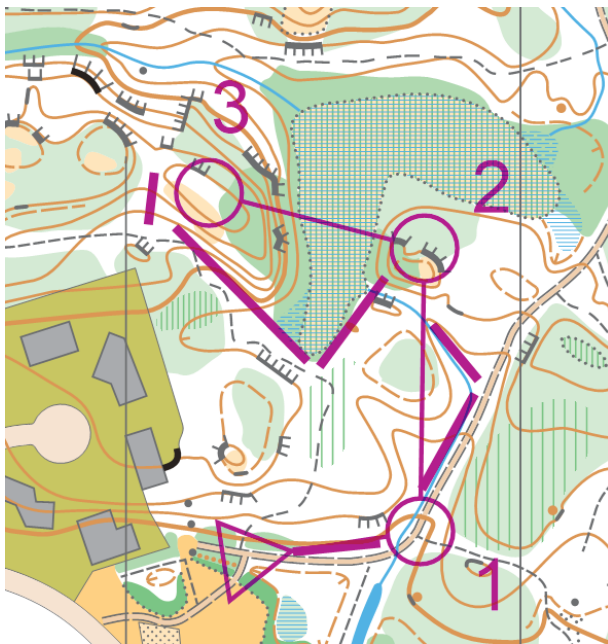
The exercise

Spend a few minutes marking an attackpoint for each control. Once you've marked an attackpoint for each leg, go run/walk the course using your attackpoints.

Handrails

While an attackpoint is a feature that tells you that you've almost arrived at a control, a handrail is a feature that you can follow to get you to your attackpoint! Trails and roads are the most obvious, but you can follow contour features (spur, reentrant) fences, streams, ditches, the edges of fields, and other long, narrow features just as easily. Following a "handrail" takes much less concentration than following a compass bearing. Also, since the handrail is illustrated on the map and a compass bearing isn't, following the handrail makes it much easier to keep track of exactly where you are.

Example



To control #1, the trail would be the handrail.

To control #2, you would follow the trail as a handrail to the reentrant, then use the reentrant as a handrail.

To control #3, use the marsh as a handrail until you reach the trail, then the trail is your handrail until you reach the reentrant, then the reentrant is your handrail until you reach the saddle.

The exercise

Spend a few minutes marking your handrail(s) for each control. Once you've marked your handrails for each leg, go run/walk the course using your handrails.

Relocation

Relocation is the technique for getting back on track if you lose map contact. It is perhaps the most important skill in orienteering as being able to find out where you are after having got lost will minimise the time wasted.

Remember the common mistakes:

- 90/180 degree errors – when you leave the control in the wrong direction, either 90 or 180 degrees off
- Over running – when you lose contact with the map and run too far past the control
- Parallel errors – when you get at least slightly off your intended course and encounter a feature which you then take for a similar feature you expected to see on your intended course.
- Dragged off course by undergrowth, contours, other runners

If this happens:

1. STOP! – Come to a complete stop; don't keep walking!
2. ORIENT YOURSELF & THE MAP - check your compass and orient your map correctly. Make sure you also orient yourself, so your map is directly in front of you, pointing in the correct direction.
3. COMPARE GROUND AND MAP
 - a. What is the area like? – runnable or slow, flat or sloping or hilly, etc. to get an idea where you might be.
 - b. Can you see anything big, obvious, or distinctive to help find your location on the map?
 - c. If this gives you an idea where you may be but you're not sure, go and check it out, see if other things fit, and remember you can see much better out in the open or from a hill.
 - d. If you're still unsure, backtrack to your last known point on the map and carefully start to navigate again.

FINALLY - Having put yourself back on course, put the mistake behind you. Do not rush to make up time!!!!

The exercise

Find a partner of similar speed to you. Choose who will be partner A and partner B. Partner A should fold his/her map and not look at it. Partner B starts to run/walk and Partner A will follow. At a point close-ish to the control, Partner B will signal to Partner A to relocate. Partner A then has to relocate and find control #1. Now Partner B folds his/her map and follows Partner A, and so on.

For the partner who is getting the other lost, some tips:

- You don't have to know exactly where you are, but it's a good idea to have at least a rough plan so you don't have to practice your relocation skills too!
- Easy, close to an attackpoint or prominent feature. Make it harder over time (further away, less obvious terrain)