

Post Workshop Assignment

Advanced Rope Rescue

– Major Offsets and Command Roles

Course number:
Due by:
Workshop location:
Workshop dates:
Student name:
Contact: Hm phone – Cell phone – Email –

Send completed assignments to:

SARINZ,
PO Box 8827,
Riccarton,
Christchurch.

Contact for assistance:

0800 4 SARINZ
0800 4 727469
info@sarinz.com
www.sarinz.com

Introduction

What is the purpose of this assignment?

This assignment aims to continue the process of applying theory to practical situations, and reflect on your learning from the workshop.

How long do you get?

This assignment is due for completion 6 months after the practical workshop or as advised by SARINZ. Some of you may find the concepts here to be difficult and therefore be tempted to leave the assignment. It is therefore important that you start this assignment as soon as possible and ask for assistance early.

How long will it take?

It is expected with reading, research, inquiry and answering the questions you are likely to put in several hours of work to complete this assignment.

Access to a course instructor?

If you have any questions with regard to this post course assignment please make contact with one of your course instructors or alternately contact SARINZ.

Assessment instructions

You need to answer every question and follow the instructions given in the tasks. This is an individual assignment and is to be your own work.

This assignment provides exercises for you to show that you are competent in part of the standards SAR3 128: Complete major offsets in advanced rope rescue, SAR3 131: Function in command roles during a technical evacuation.

You will be assessed as competent (C), not yet competent (NYC) or insufficient evidence (IE). If you are assessed as competent then your pass will be forwarded to Tai Poutini Polytechnic Search and Rescue Programme; if you are assessed as not yet competent an instructor will work with you to achieve competence where possible. If not, the matter will be referred to the SARINZ Administration Officer to process. If there is insufficient evidence, for example not completing an assessment task then it will be dealt with similarly to not yet competent.

Major offsets

Learning outcome

The purpose and reasoning underpinning offsets is explored in comparison with other techniques.

Range: high angle techniques, high line techniques.

Reference

To offset or highline article.

Exercise

Answer the following questions

1. In comparison with highlines and high angle rescue techniques what are some of the key reasons why offsets may be preferred?

2. In what situations would highlines be preferred?

3. In what situations would standards high angle rescue techniques be preferred?

Scenario 1 Deflected offset

Situation

A climber has fallen between two rock outcrops. The outcrops are 10m apart and 25m high. Both sides are accessible from the top. The bottom has poor access and potentially loose rock as a hazard.



Task

You have been assigned the task of setting up a **deflected offset** to rescue the person from the bottom of the rock outcrops while minimising risk to the rescue team. The deflected offset has a main and belay from both sides.

Resources

- Team members x 6
- Stretcher including rigging
- Mainline and Belay line x 2
- Pulley system x 2
- Lowering system x 2
- High directional (tripod)
- Other anchor rigging equipment to complete an offset.

1. As the Technical Sector Officer (TSO) what team roles would you appoint and where would they be located?







2. As the Technical Sector Officer (TSO) what communication methods would you use with your team at various parts of the rescue?

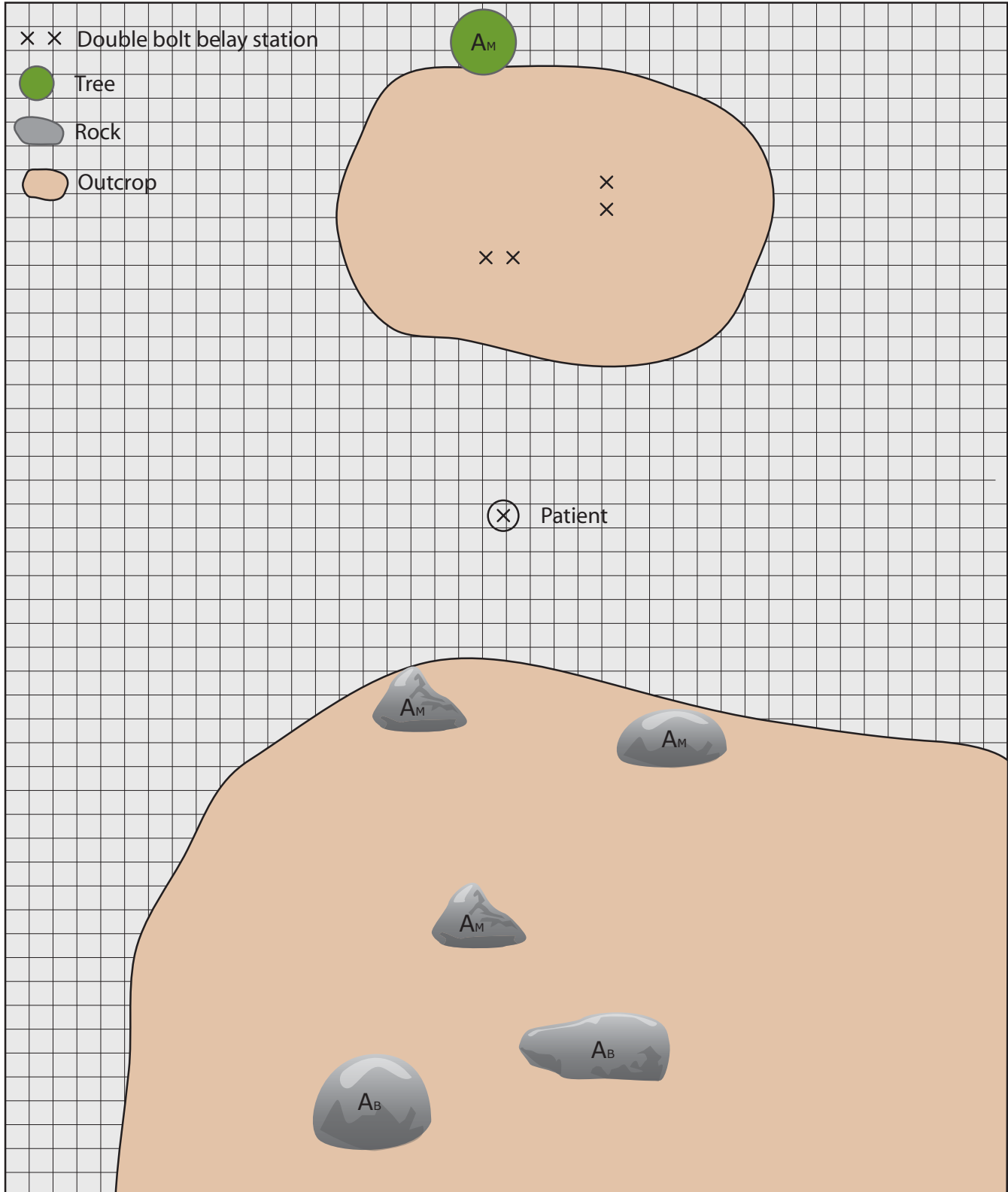
3. As the Technical Sector Officer (TSO) draw up a plan view (on the following page) of what you want to occur as a resource to brief your team?



Rigging worksheet

KEY

	MAINLINE	A	ANCHOR	P	PRUSIK		LOAD # PAX
⋯	BELAYLINE	A _M	MARGINAL ANCHOR	P _R	RATCHET PRUSIK		PMP
⊕	BELAY	A _B	BOMBPROOF ANCHOR	P _H	HAUL PRUSIK		PULLEY
	PRUSIK	A _{FT}	FOCUSSED ANCHOR	H	HAULER		EDGE
	BRAKE	FT	FRONT-TIE	LD	LOW DIRECTIONAL		
		BT	BACK-TIE	HD	HIGH DIRECTIONAL		
				R	REDIRECT		

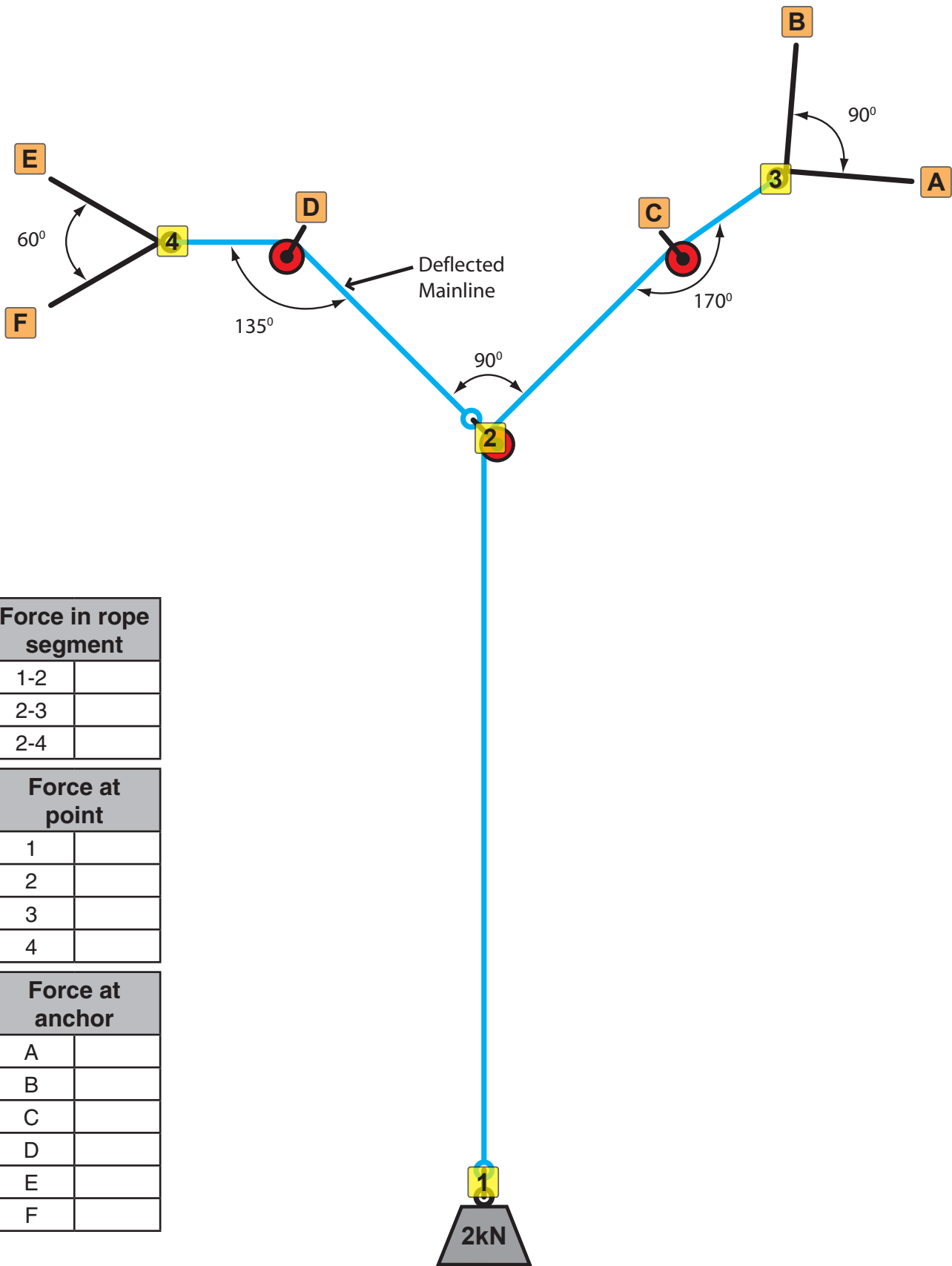




4. Now undertake an analysis of the deflected offset (on the following page) with a deflected angle of 90 degrees? Use the vector forces calculation guide to calculate the forces on the system.

5. What is the force on the deflected mainline on the way down to the patient with only attendant and stretcher as the load (100kg mass)?

6. What is the force on the deflected mainline on the way up with the patient, attendant and stretcher as the load (200kg mass)?



Scenario 2 Tracking line offset

Situation

A climber has fallen and needs to be evacuated from the bottom to the top of a cliff. The cliff is 35m high. Both top and bottom are accessible. The bottom side has potentially loose rocky terrain to traverse as a hazard.



Task

You have been assigned the task of setting up a **tracking line offset** to rescue the person from the top to the bottom of the cliff while minimising risk to the rescue team. The tracking line has a main and belay from the top.

Resources

- Team members x 6
- Stretcher including rigging
- Mainline and Belay line
- Pulley and lowering systems
- Tracking line
- High directional (tripod)
- Other anchor rigging equipment to complete an offset.

1. As the Technical Sector Officer (TSO) what team roles would you appoint and where would they be located?










2. As the Technical Sector Officer (TSO) what communication methods would you use with your team at various parts of the rescue?

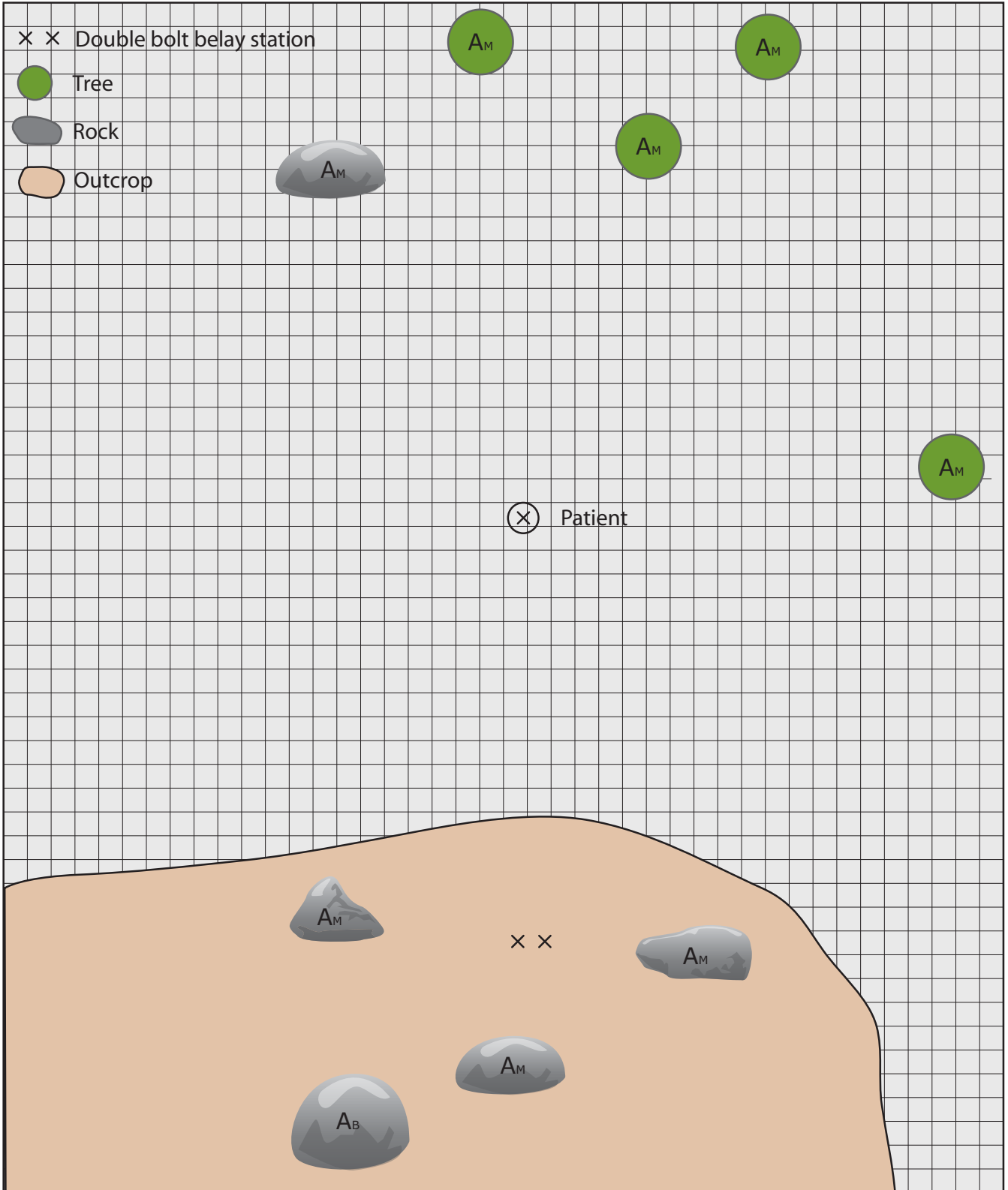
3. As the Technical Sector Officer (TSO) draw up a plan view (on the following page) of what you want to occur as a resource to brief your team?



Rigging worksheet

KEY

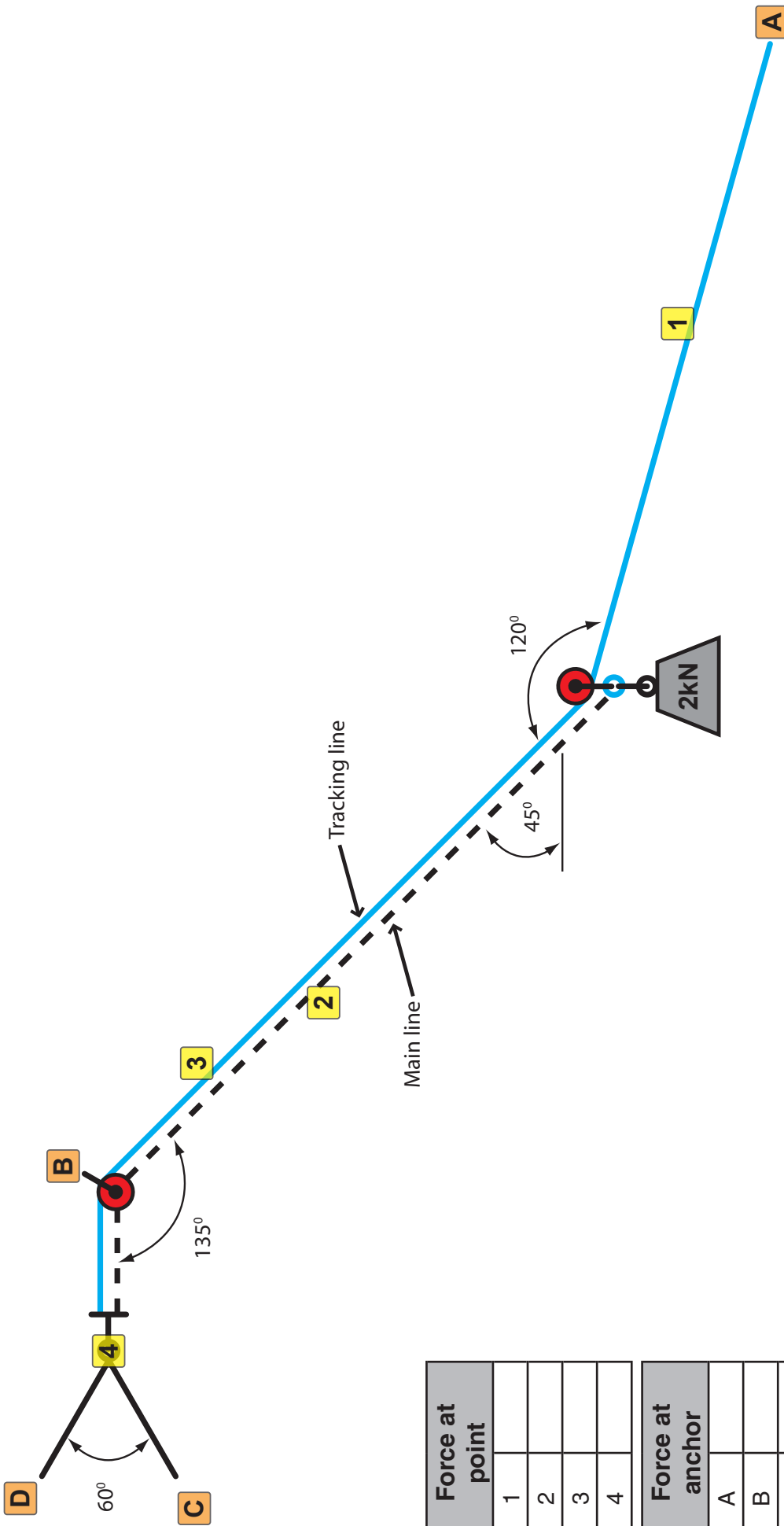
 MAINLINE	A ANCHOR	P PRUSIK	 LOAD # PAX
 BELAYLINE	A _M MARGINAL ANCHOR	P _R RATCHET PRUSIK	 PMP
 BELAY	A _B BOMBPROOF ANCHOR	P _H HAUL PRUSIK	 PULLEY
 PRUSIK	A _F FOCUSED ANCHOR	H HAULER	 EDGE
 BRAKE	A _{FT} FRONT-TIE ANCHOR	LD LOW DIRECTIONAL	
	FT FRONT-TIE	HD HIGH DIRECTIONAL	
	BT BACK-TIE	R REDIRECT	





4. Now undertake an analysis of the tracking line offset (on the following page) with a tracking line slope angle of 45 degrees ? Use the vector forces calculation guide to calculate the forces on the system.
5. What is the force on the tracking line on the way down to the patient with the attendant and stretcher as the load (100kg mass)?

6. What is the force on the mainline on the way up with the patient, attendant and stretcher as the load (200kg mass)?



Force at point	
1	
2	
3	
4	

Force at anchor	
A	
B	
C	
D	

Scenario 3 Two rope offset

Situation

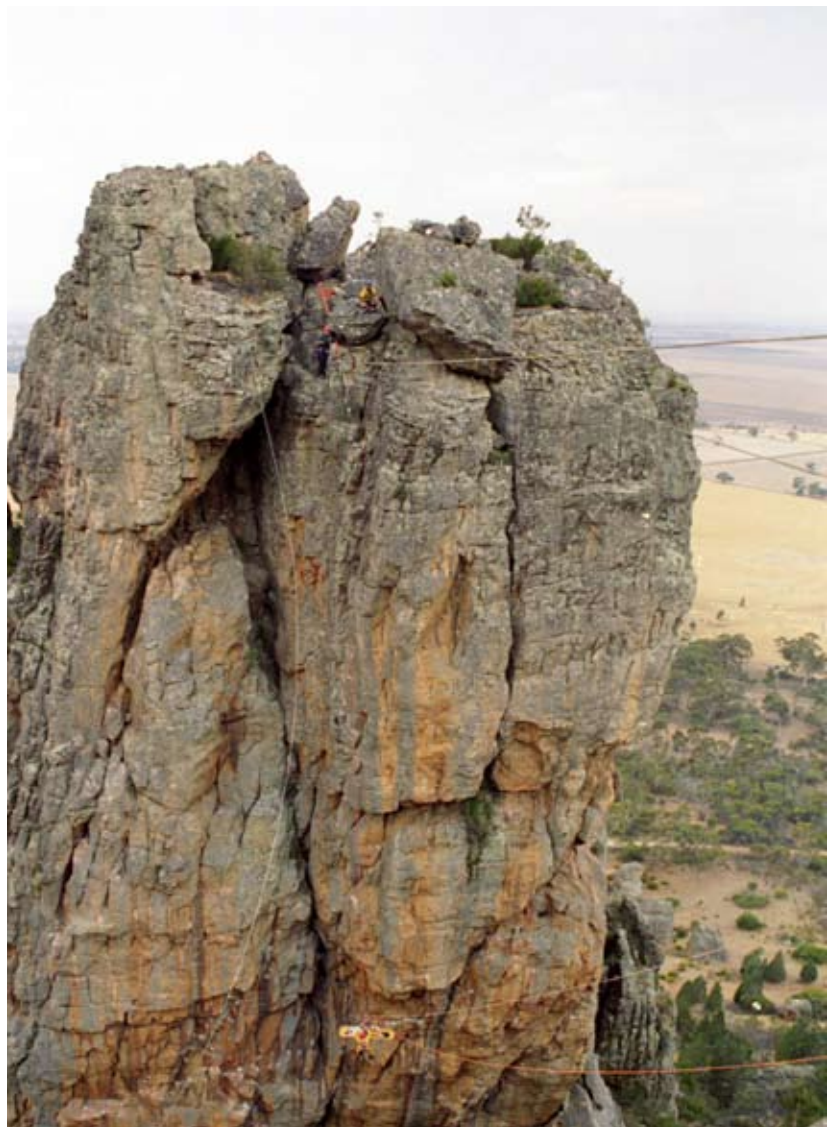
A climber has fallen on the far side of two rock outcrops. The outcrops are 40m apart and 75m from the top to bottom. Both sides are accessible from the top. The bottom has poor access and potentially loose rock as a hazard.

Task

You have been assigned the task of setting up a **two rope offset** to rescue the person to the top of the cliff while minimising risk to the rescue team. The two rope offset has a main and belay from each side.

Resources

- Team members x 6
- Stretcher including rigging
- Mainline and Belay line x 2
- Pulley system x 2
- Lowering system x 2
- High directional (tripod)
- Other anchor rigging equipment to complete an offset.



1. As the Technical Sector Officer (TSO) what team roles would you appoint and where would they be located?

2. As the Technical Sector Officer (TSO) what communication methods would you use with your team at various parts of the rescue?

3. As the Technical Sector Officer (TSO) draw up a plan view (on the following page) of what you want to occur as a resource to brief your team?



Rigging worksheet

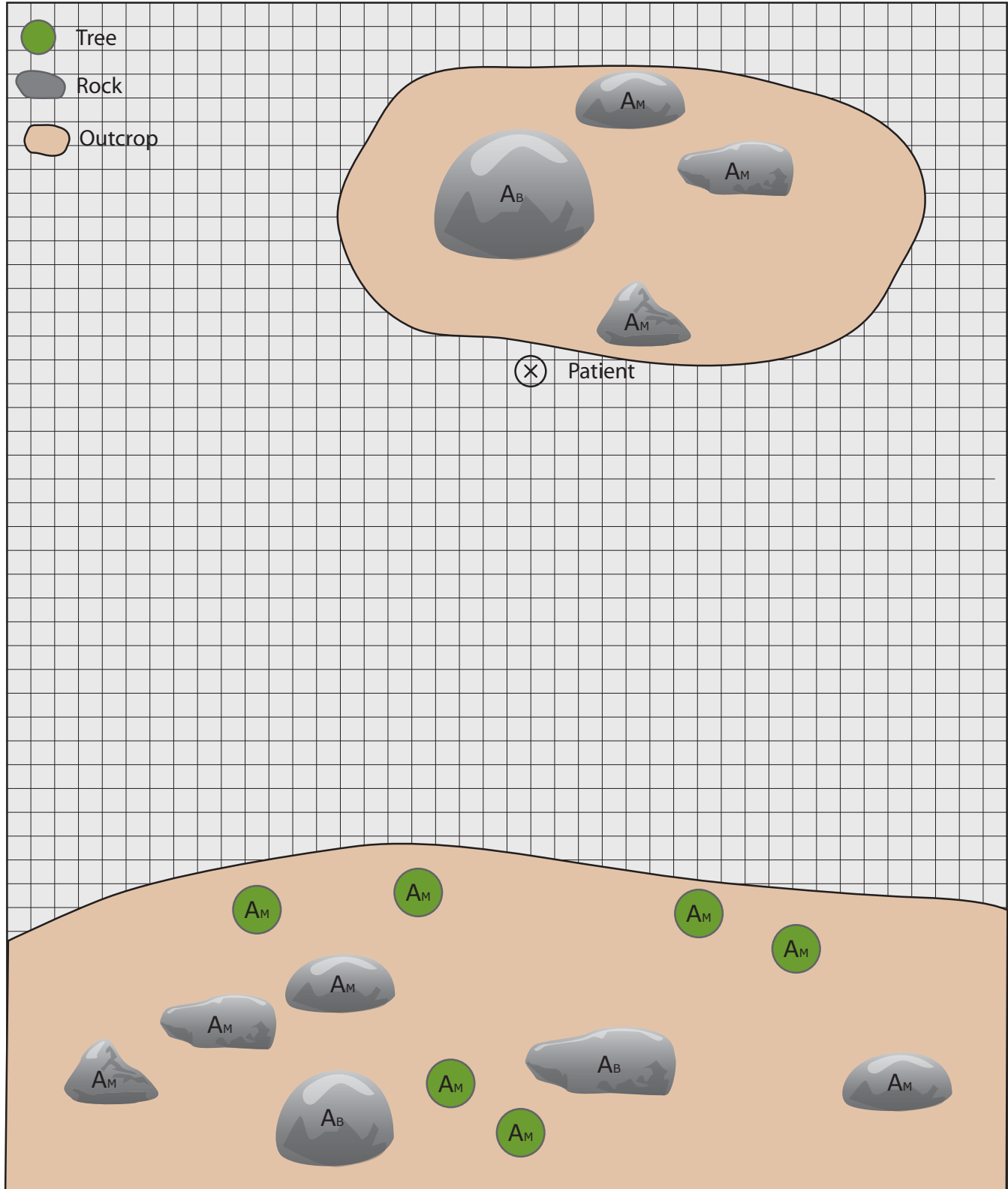
KEY

- | MAINLINE
- ⋯ BELAYLINE
- ⊕ BELAY
- ⚡ PRUSIK
- ⚡ BRAKE

- A ANCHOR
- A_M MARGINAL ANCHOR
- A_B BOMBPROOF ANCHOR
- A_F FOCUSED ANCHOR
- A_{FT} FRONT-TIE ANCHOR
- FT FRONT-TIE
- BT BACK-TIE

- P PRUSIK
- P_R RATCHET PRUSIK
- P_H HAUL PRUSIK
- H HAULER
- LD LOW DIRECTIONAL
- HD HIGH DIRECTIONAL
- R REDIRECT

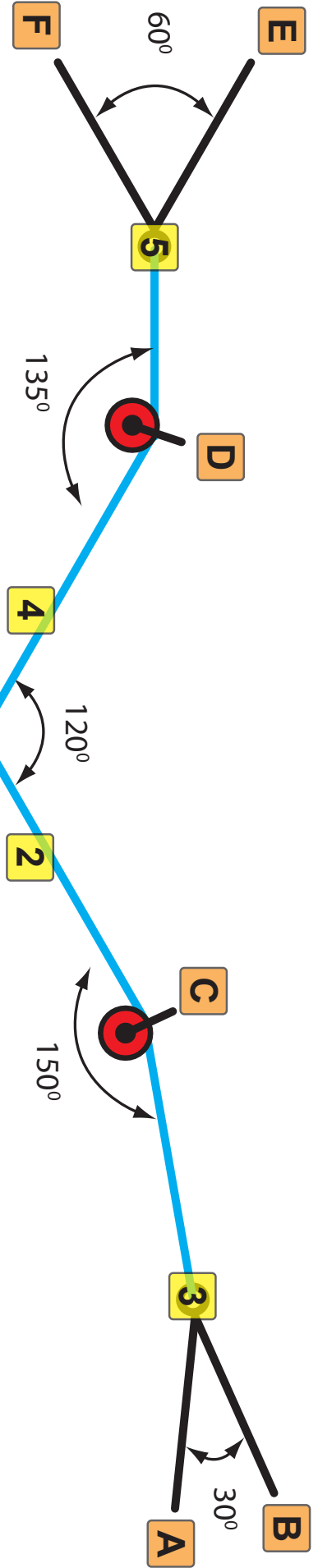
- △ LOAD # PAX
- ⚙ PMP
- ⊙ PULLEY
- ⚡ EDGE





4. Now undertake an analysis of the two rope offset (on the following page) with a offset angle of 120 degrees? Use the vector forces calculation guide to calculate the forces on the system.
5. What is the maximum force on the two rope offset on the way down to the patient, with the attendant and stretcher as the load, if the maximum offset angle was 120 degrees (100kg mass)?

6. What is the maximum force on the two rope offset on the way up, with the patient, attendant and stretcher as the load, if the maximum offset angle was 120 degrees (200kg mass)?



Force at point	
1	
2	
3	
4	
5	

Force at anchor	
A	
B	
C	
D	
E	
F	

Advanced Rope Rescue – Assessment – Student Results

<p>This column lists the performance criteria that the student will have to demonstrate to the assessor to be deemed competent.</p> <p>A student must be assessed as competent in all aspects to be awarded the standard.</p>	<p>This column records your results. If you wish to challenge the findings of the assessor you can either make a statement on this page or attach it to this record. This will go to the Tai Poutini Polytechnic SAR Programme Coordinator.</p>
Competency Demonstrated	Results of Exercises
Major Offsets	
Exercise	C / NYC
Scenario 1 Deflected Offset	
Task	C / NYC
Scenario 2 Tracking line offset	
Task	C / NYC
Scenario 2 Two rope offset	
Task	C / NYC
Assessor comments	
Assessor name:	
Assessor signature:	
Date:	

The following can be used when the student wishes to challenge the findings of the assessor:

Student: I have sighted my assessment result above and wish to challenge the findings of the assessor. I have made a statement, which is attached.	
Signed Student:	Date:
Student statement	