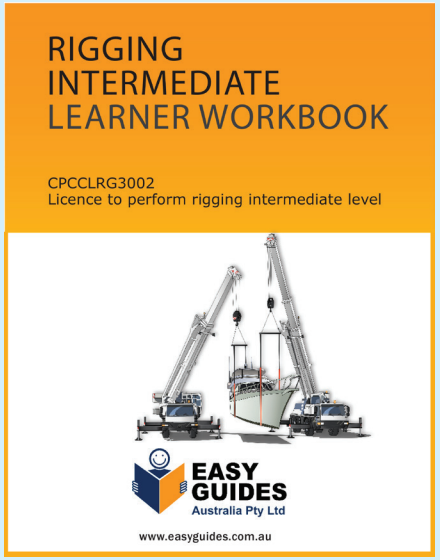
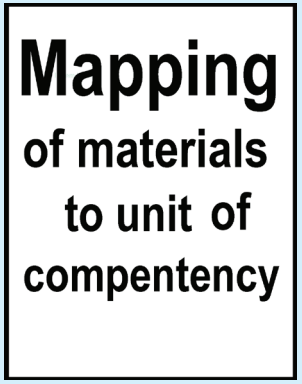
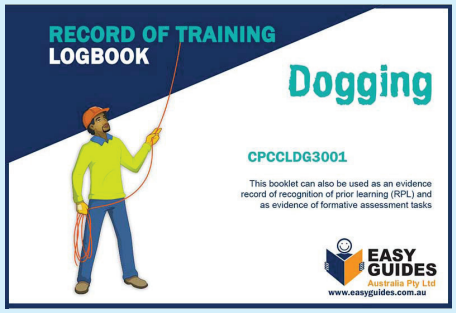
The benefits of using a Trainer Value Pack







Save $470 when you buy the Trainer Value Pack.

Everything you need to deliver a unit of competency.

Materials can be printed and customised to suit your needs.

SAFETY AND LICENCE GUIDE

LLN READY

Scaffolding -Basic

LICENCE

CPCCLSF2001

Licence to erect, alter and dismantle scaffolding basic level

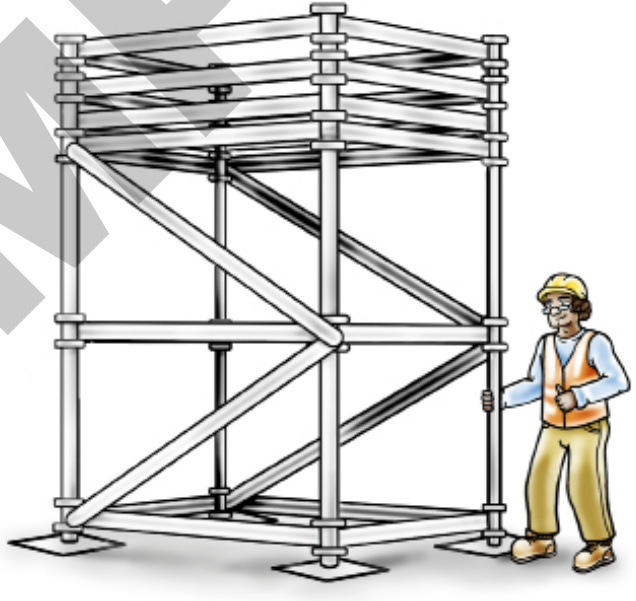
EASY GUIDES
Australia Pty Ltd

SAMPLE

Contents

SAMPLE

INTRODUCTION TO BASIC SCAFFOLDING



SAMPLE

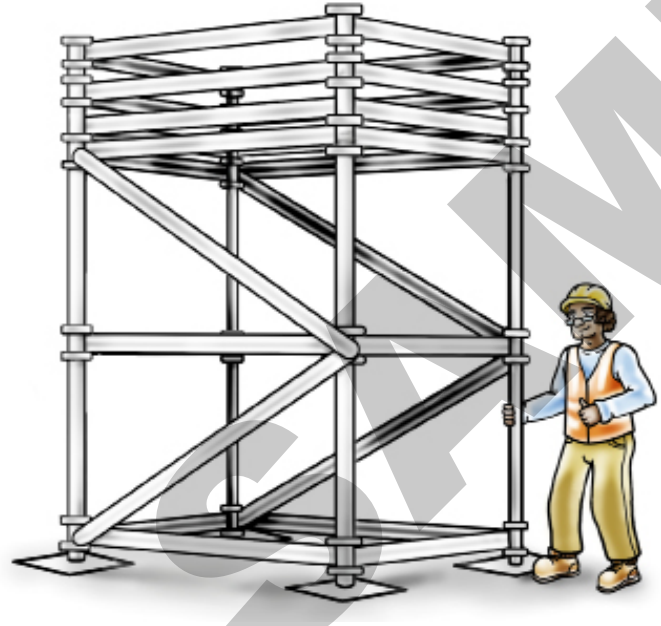
© Easy Guides Australia Pty. Ltd.

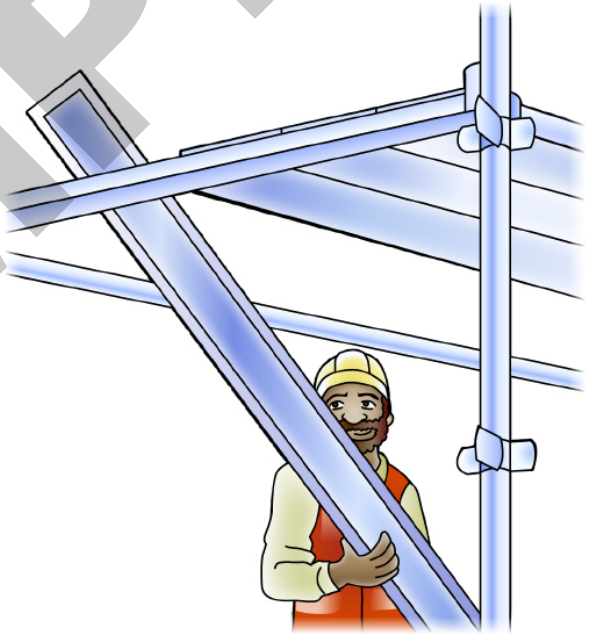
May not be reproduced

What is basic scaffolding?

Basic scaffolding is work with:

- Prefabricated scaffolds
- Cantilevered hoist with a working load limit not exceeding 500 kg (materials only)
- Ropes
- Gin wheels
- Safety nets and static lines



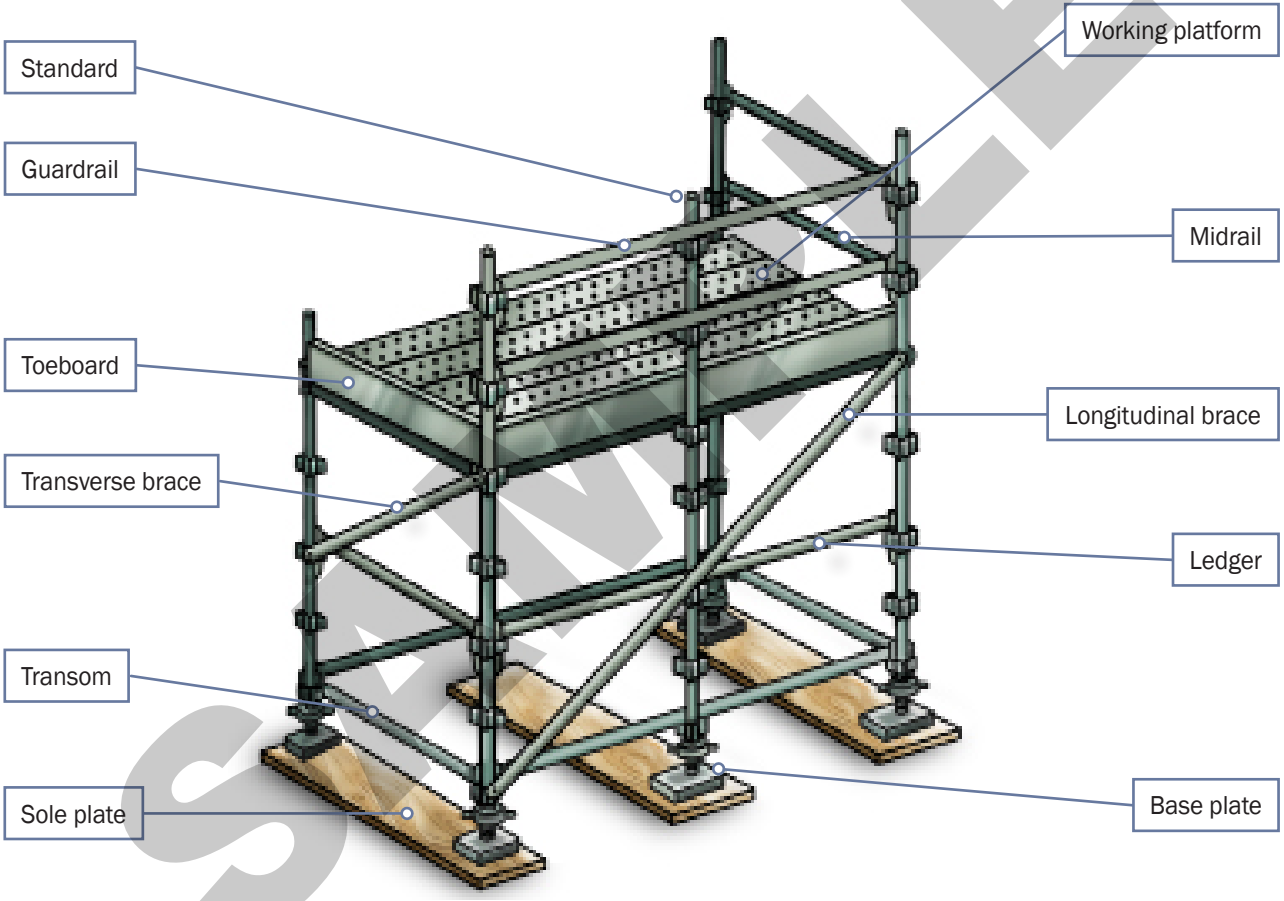


SAMPLE

© Easy Guides Australia Pty. Ltd.

May not be reproduced

Parts of basic scaffolding



SAMPLE

© Easy Guides Australia Pty. Ltd.

May not be reproduced

PLAN TASK

Element 1

SAMPLE

© Easy Guides Australia Pty. Ltd.

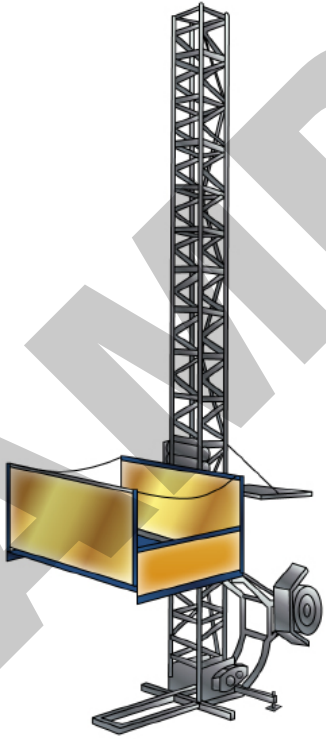
May not be reproduced

QUESTION 8

Name some jobs a basic scaffolder can do and **not** break the law.

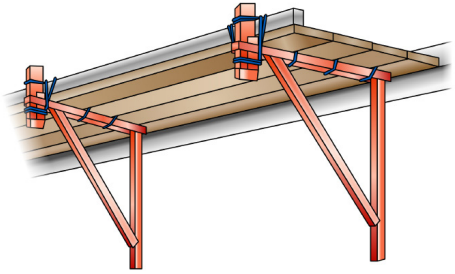
A basic scaffolder is allowed to:

Use cantilevered hoists with a maximum load of less than 500 kg.



Use static lines and safety nets.

Use bracket scaffolds including tank and formwork.



...CONTINUES ON NEXT PAGE

SAMPLE

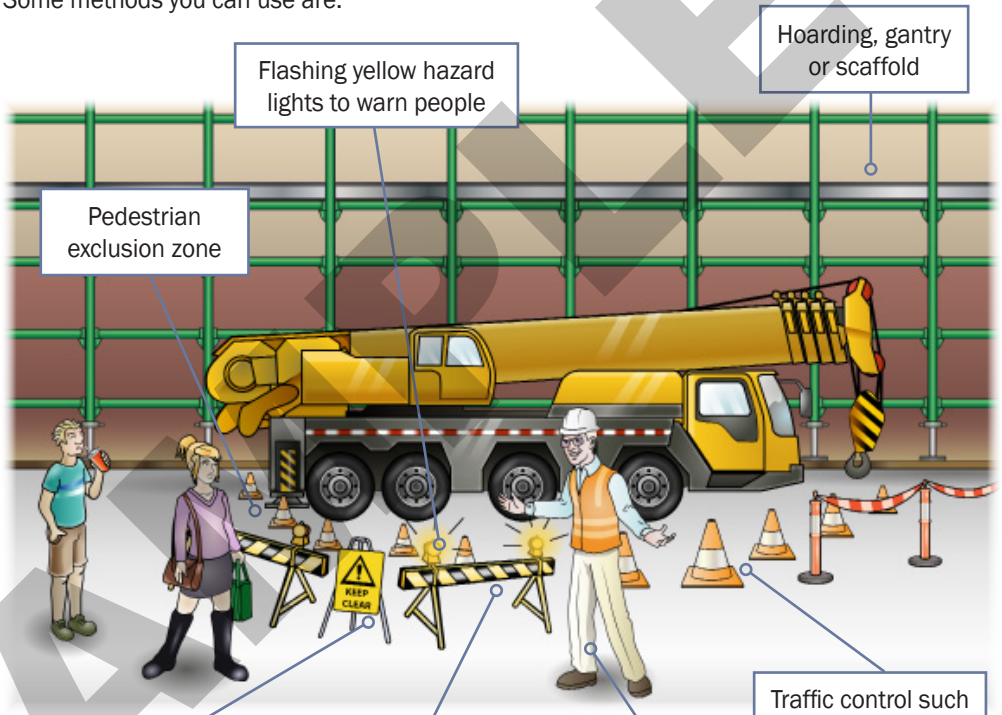
© Easy Guides Australia Pty. Ltd.

May not be reproduced

QUESTION 14

Name some hazard controls you can use to help keep pedestrians and workmates safe.

Some methods you can use are:



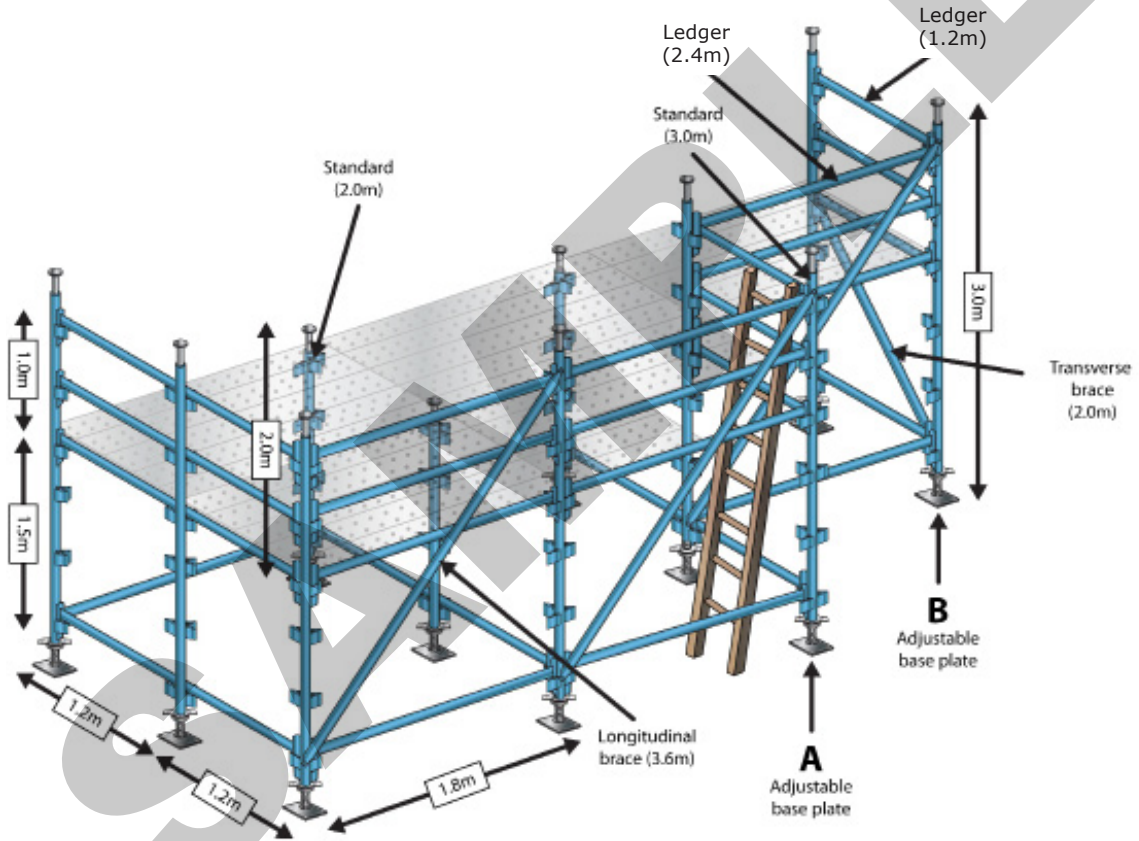
SAMPLE

© Easy Guides Australia Pty. Ltd.

May not be reproduced

Modular scaffolding

This is a drawing of a modular scaffold. You will need to look back at this drawing to help you answer the question.



SAMPLE

© Easy Guides Australia Pty. Ltd.

May not be reproduced

The table below shows how many of each scaffold component you need to erect this modular scaffold.

Bill's Scaffolding Pty Ltd Modular scaffolding equipment list

Component	Length	Quantity	Weight	Sub Total Weight
Standard	3.0 m	8	18 kg	144 kg
Standard	2.0 m	3	12 kg	36 kg
Transom	1.8 m	22	9 kg	198 kg
Ledger/guardrail	1.2 m	21	10 kg	210 kg
Traverse brace (1.8 m bay)	2.7 m	3	12 kg	36 kg
Longitudinal brace (1.2m bay)	2.0 m	3	9 kg	27 kg
Captive plank (225 mm)	1.8 m	23	13 kg	299 kg
Captive plank (225 mm)	0.7 m	2	5 kg	10 kg
Ladder access putlog	1.2 m	1	8 kg	8 kg
Adjustable base plate	750 mm	11	8 kg	88 kg
Ladder	4.0 m	1	20 kg	20 kg

SAMPLE

© Easy Guides Australia Pty. Ltd.

May not be reproduced

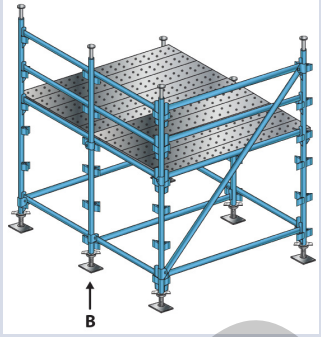
QUESTION 30

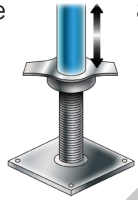
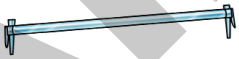
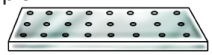
...CONTINUED FROM PREVIOUS PAGE

iii) Look at the drawing again.

How much dead load is supported by adjustable base plate B?

Write your calculations in the table .



Components	Weight	Calculation	Total
Adjustable base plate 	8 kg	1 × 8	=
3 m standard 	18 kg	1 × 18	=
Transom 	10 kg	8 × 10 ÷ 2 (half the weight)	=
Ledger 	9 kg	2 × 9 ÷ 2 (half the weight)	=
Brace (1.2 m bay) 	9 kg	1 × 9 ÷2 (half the weight)	=
1.8 m steel plank 	13 kg	10 × 13 ÷ 4 (quarter the weight)	=
		Total dead load =	

...CONTINUES ON NEXT PAGE

SAMPLE

© Easy Guides Australia Pty. Ltd.

May not be reproduced

QUESTION 30

...CONTINUED FROM PREVIOUS PAGE

iv) You have calculated the dead load. You are now going to calculate the live load.

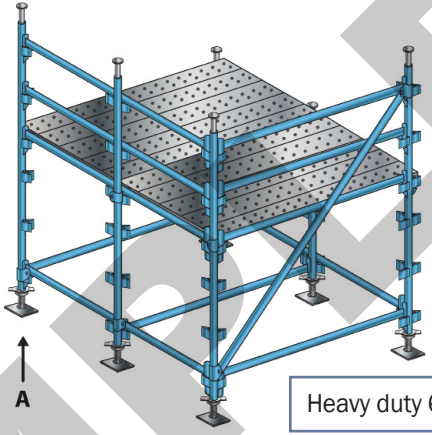
Calculate how many kilograms of live load could be carried by the same adjustable baseplates A and B.

The scaffold shown on the page titled 'modular scaffolding' will be used for heavy duty work which is 675 kg per bay.

Soleplate calculation for A

Ground bearing pressure = 2.2 t/m²

Soleboard width = 0.23 m (230 mm)



Calculation:

Live load = 675 kg ÷ 3 = ... × 1 = ...

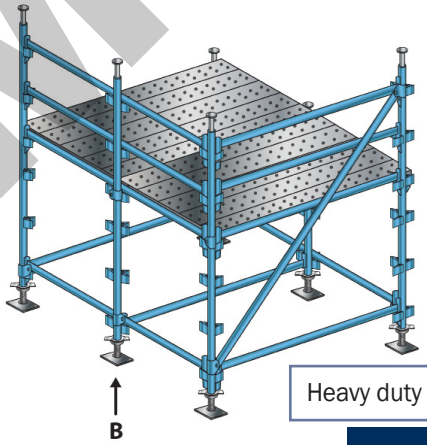
.....

Heavy duty 675 kg per bay

Soleplate calculation for B

Ground bearing pressure = 2.2 t/m²

Soleboard width = 0.23 m (230 mm)



Calculation:

Live load = 675 kg ÷ 3 = ... × 1 = ...

.....

Heavy duty 675 kg per bay

...CONTINUES ON NEXT PAGE

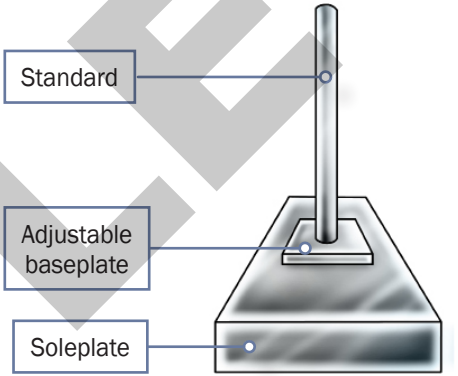
SAMPLE

© Easy Guides Australia Pty. Ltd.

May not be reproduced

The soleplates you will use to construct the scaffold are 230 mm wide. This task will check your understanding of load distribution over surface area and your ability to convert common units of measurement to find out the length of the soleplate needed.

The site engineer has certified that the soil supporting the scaffold has a bearing capacity of 2.2t per square metre.



How to get L.O.S.T. (Length Of Soleplate Timber)

Or how long must the 230 mm soleplate be under the adjustable baseplate? Easy! Just do this!

Example:

Baseplate A - heavy duty with bearing capacity 2.2 t/m

DL + LL = TLC

TLC ÷ LPG ÷ WOT = L.O.S.T.

a) First get TLC

DL	**+**	**LL**	**=**	**TLC**
Dead Load	+	Live Load	=	Total Load Calculation

b) Then work out LOST

TLC	**+**	**LPG**	**÷**	**WOT**	**=**	**LOST**
Total Load Calculation	+	Load Pressure on Ground	÷	Width of Timber	=	Length of Soleplate Timber

SAMPLE

© Easy Guides Australia Pty. Ltd.

May not be reproduced

QUESTION 30

...CONTINUED FROM PREVIOUS PAGE

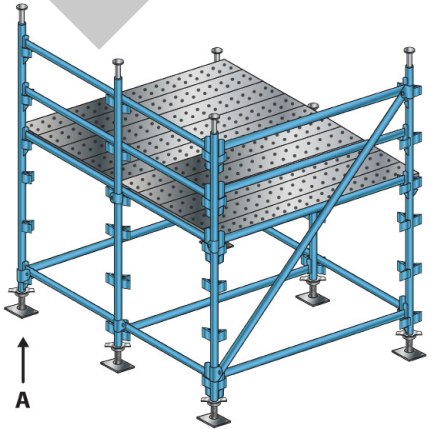
Calculate, to the nearest 10 mm, the minimum length of soleplate you need under the same adjustable baseplate. (Use the dead load you calculated for A or B and the live load you calculated for A or B to help you. DO NOT include toeboards. DO NOT include the self-weight of soleplates.

Length of soleplate A

Total load = The adding of dead and live load
Soleboard length = Total load
÷ width of soleboard
÷ ground bearing pressure
This answer is calculated to the nearest 10 mm

Ground bearing pressure = 2.2 t/m²

Soleboard width = 0.23 m (230 mm)



Total load
(dead load + live load) = ...

Soleboard length
(Total load ÷ 0.23 (width of soleboard) ÷ (2.2 t/m² (ground bearing pressure)) =

.....

(Calculate the nearest 10 mm) = ...

SAMPLE

© Easy Guides Australia Pty. Ltd.

May not be reproduced

QUESTION 30

You must have filled in at least 14 of the 16 items. Check Drawing No VFS/0123 on the following page and see if you can find:

1. Name of client?
2. Site address?
3. Scaffold location?
4. Type of scaffold?
5. Number of working platforms?
6. Duty category of working platforms?
7. Number of lifts above base lifts?
8. Scaffold height?
9. Number of bays longs?
10. Scaffold length?
11. Type of access (ladder/ start/ramp)?
12. Design drawing reference?
13. Date of handover?
14. Time of handover?
15. Name of responsible scaffolder?
16. Signature of responsible scaffolder?

Bill's Scaffolding Pty Ltd
HANDOVER CERTIFICATE

Number: 9989

Each of the following items must be completed by the responsible scaffolder:

1) Client: .....
2) Site Address: .....
.....
3) Scaffold location: .....
4) Type of scaffold: Tube and coupler / Frame / Tower Frame / Modular / Other (Circle the appropriate type.)
5) Number of working platforms: .....
6) Duty category of working platforms: Light / Medium / Heavy / Special (Circle the appropriate type.)
7) Number of lifts above base life: .....
8) Scaffold height: .....
9) Number of bays long: .....
10) Scaffold length: .....
11) Type of access: Ladder / Stair / Ramp / Other (Circle the appropriate type.)
12) Design drawing reference: .....
13) Date of handover: .....
14) Time of handover: .....
15) Name of responsible scaffolder:
.....
16) Signature responsible scaffolder:
.....

SAMPLE

© Easy Guides Australia Pty. Ltd.

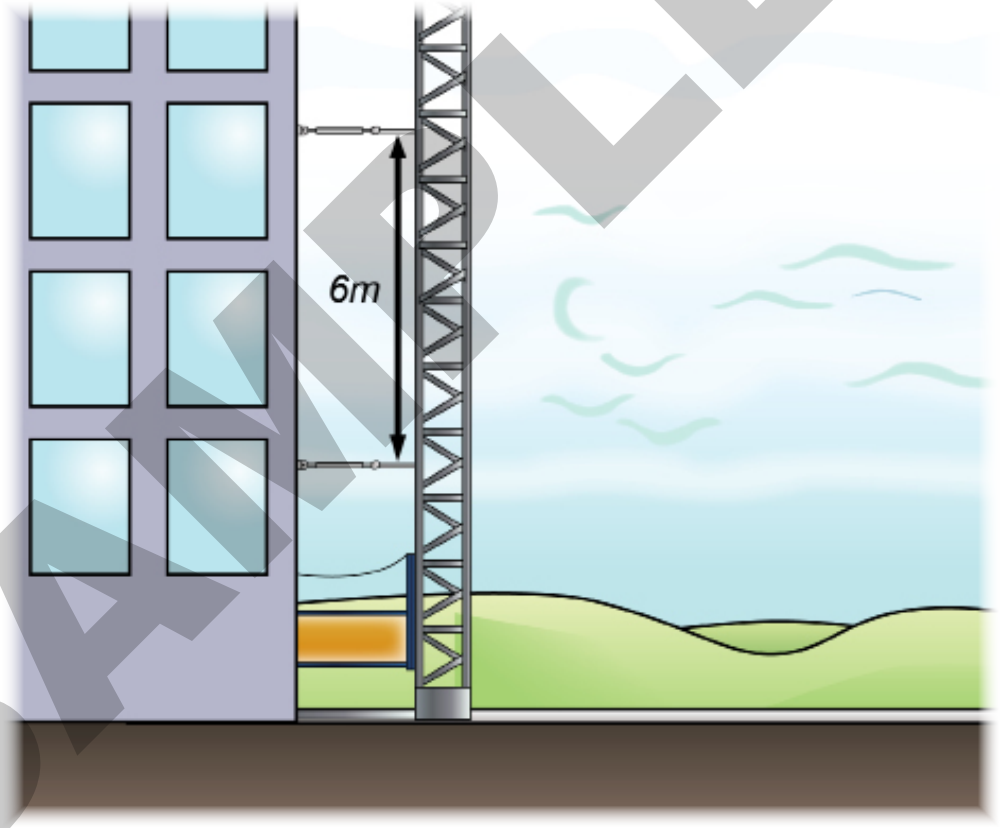
May not be reproduced

QUESTION 105

You are setting up the lateral braces on a cantilevered hoist.

What's the biggest space you can have between each brace?

6 metres (unless the maker's instructions say something different).



SAMPLE

© Easy Guides Australia Pty. Ltd.

May not be reproduced

QUESTION 107

Answer these questions:

a) What is the minimum width of a light duty working platform?

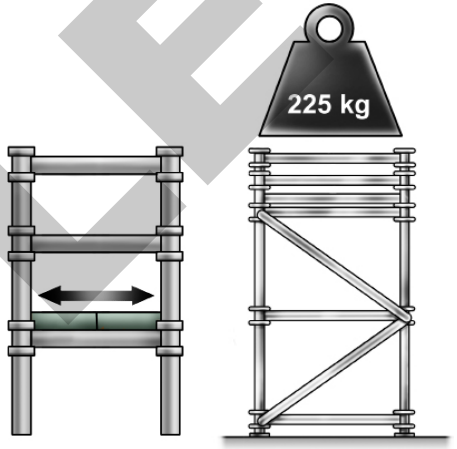
b) What is the maximum load in kN, a light duty working platform can hold?

c) What is the maximum load in kilograms, a light duty working platform can hold?

a) 450 mm.

b) 2.2 kN per bay.

c) 225 kg per bay.



QUESTION 108

Answer these questions:

a) What is the minimum width of a medium duty working platform?

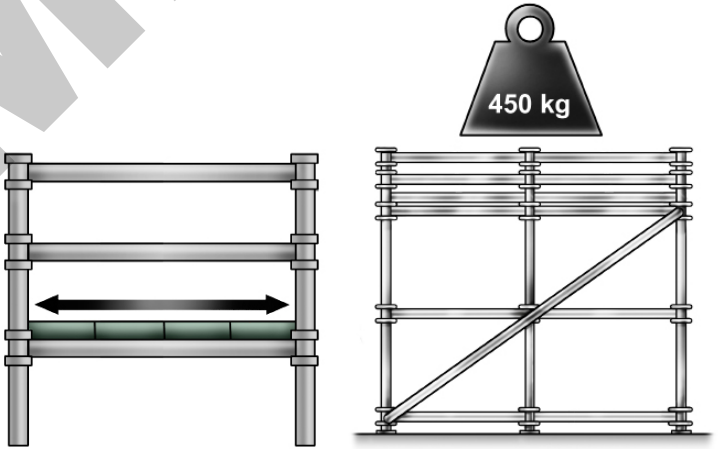
b) What is the maximum load, in kN, a medium duty working platform can hold?

c) What is the maximum load, in kilograms, of a medium duty working platform can hold?

a) 675 mm.

b) 4.4 kN per bay.

c) 450 kg per bay.



SAMPLE

© Easy Guides Australia Pty. Ltd.

May not be reproduced

COMPLETE TASK

Element 5

SAMPLE

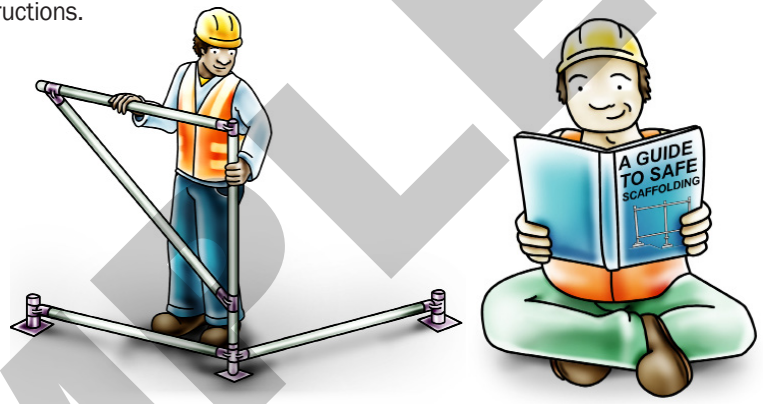
© Easy Guides Australia Pty. Ltd.

May not be reproduced

QUESTION 134

What do you need to do when taking apart a scaffold?

You need to keep the scaffold stable when taking it apart, and follow the manufacturer's instructions.



QUESTION 135

What else can you do to take apart a scaffold safely?

Make sure you wear the right PPE and safety equipment, and communicate with your workmates.

SAMPLE

© Easy Guides Australia Pty. Ltd.

May not be reproduced

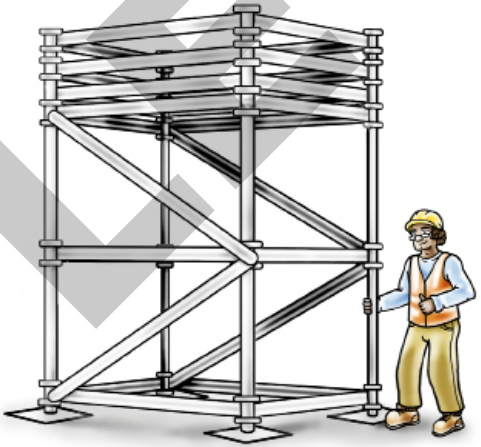
QUESTION 137

When and how often should you inspect scaffolding?

Scaffolding needs to be checked:

- Before you first use it
- Every 30 days or less
- When there has been an unsafe event
- After repairs.

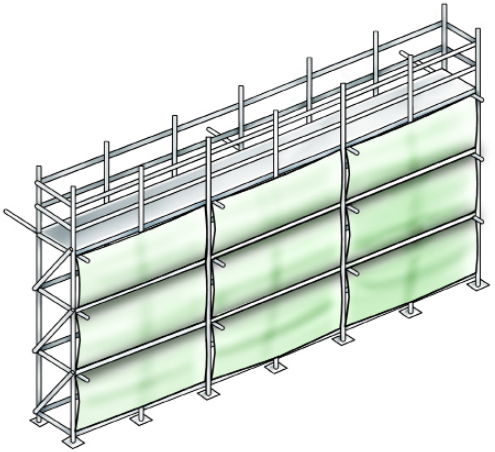
Scaffolding should be inspected by someone with a licence. Complicated scaffolds should be inspected by an engineer.



QUESTION 138

Does an engineer need to check the design of a sheeted scaffold?

Yes, to make sure it is safe.



SAMPLE

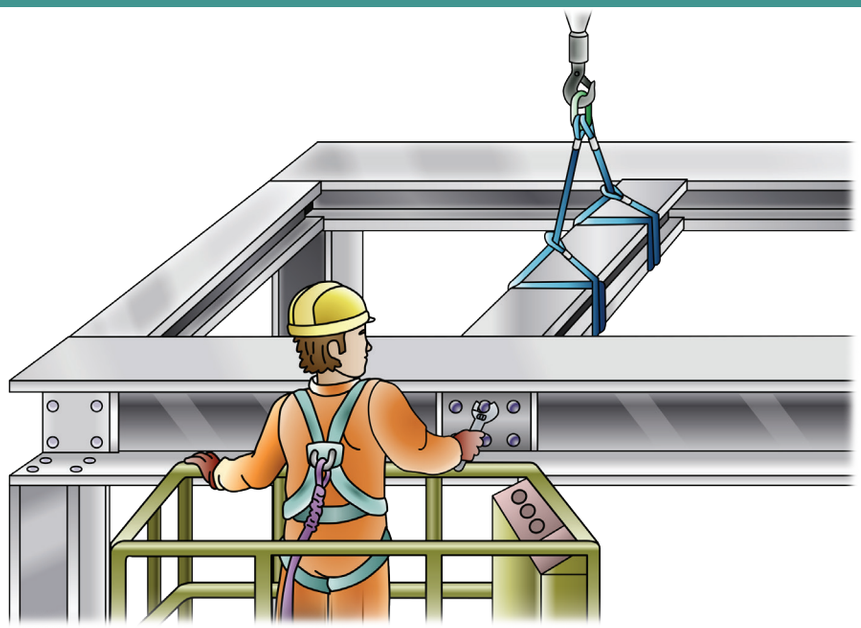
© Easy Guides Australia Pty. Ltd.

May not be reproduced

RIGGING BASIC
LEARNER WORKBOOK

LLN READY

CPCCLRG3001
Licence to perform rigging basic level



EASY GUIDES
Australia Pty Ltd
www.easyguides.com.au

PROUDLY PRINTED IN AUSTRALIA

Learner name:

Student number: Date:

MAPPING

CPCCLSF2001 - Licence to perform basic scaffolding

Performance Evidence		Safety and Licence Guide/PowerPoint Presentation	Learner workbook	Review Questions	Practical Formative Assessment	Assessment Instrument Summative Assessment (Part 1: Knowledge Assessment)	(Part 3: Performance Assessment)
1.1	Review task instructions, consult with relevant persons to seek clarification as required, and obtain relevant workplace information.	Page 17-21, 39-40		Question 8, 13-14	Practical Training Task 1		
1.2	Obtain and read information, including safe work method statements (SWMSs), required to ensure that activities are performed in compliance with workplace-specific and safe work requirements.	Page 19, 30-38, 40, 44		Question 8	Practical Training Task 1		
1.3	Obtain and read information required to ensure that equipment inspection, use, maintenance, and storage complies with manufacturer requirements.	Page 44		Question 14	Practical Training Task 1		
1.4	Identify methods of moving and placing tools, equipment, and materials to minimise the risk of falling objects, to avoid inappropriate carrying on ladders and to minimise hazardous manual tasks.	Page 22-37, 44-46		Question 20	Practical Training Task 1-2		

1.5	Identify methods of moving and placing tools, equipment and materials to minimise the risk of falling objects, to avoid inappropriate carrying on ladders and to minimise hazardous tasks	Page 28, 36		Question 20	Practical Training Task 2	
1.6	Identify required scaffold and associated equipment.	Page 43, 45-46		Question 15-16	Practical Training Task 1	
1.7	Calculate loads exerted on and by the scaffold and scaffolding equipment.	Page 41-43, 47-76		Question 17-18	Practical Training Task 1	
1.8	Establish required communication methods with relevant persons	Page 38-39, 43, 77-80		Question 19	Practical Training Task 1	
2.1	Select risk controls and equipment and fall protection, and check that it is working and fit for purpose.	Page 82-83		Question 21, 22, 24	Practical Training task 2-3	
2.2	Select and check PPE.	Page 84-85		Question 27	Practical Training Task 2-3	
2.3	Inspect scaffold and associated equipment for defects, and isolate, tag out, report and record defective items.	Page 83, 86-91		Question 23, 25	Practical Training Task 3	
2.4	Select communication equipment and check that it is working and fit for use.	Page 92		Question 26	Practical Training Task 3	

3.1	Establish and maintain communication with relevant persons to ensure task plan and risk controls are communicated clearly, including any impact on other workplace activities.	Page 95		Question 28-29	Practical Training Task 4-5		
3.2	Ensure risk controls and safety measures and equipment have been put in place, including the fitting, adjusting and anchoring of fall protection equipment.	Page 95, 97-107, 118-119		Question 27, 33, 36	Practical Training Task 4		
3.3	Consult with relevant persons to ensure that ground and foundation have been assessed as suitable for task.	Page 41-43, 96, 108-109, 111, 119		Question 30	Practical Training Task 4		
3.4	Prepare footings to support scaffold and scaffold equipment.	Page 110, 112-114, 116		Question 31-32	Practical Training Task 4		
3.5	Prepare scaffold and scaffold equipment, and place in a stable position ready for erection.	Page 114-117		Question 31-32	Practical Training Task 4		
4.1	Erect and dismantle scaffold and equipment while maintaining stability, in accordance with workplace and manufacturer requirements.	Page 82, 122-123, 127, 130, 133-134, 136-138, 146-148		Question 34-37, 39	Practical Training Task 5		
4.2	Erect and dismantle modular or pre-fabricated scaffold.	Page 82-83, 129, 131-132		Question 34	Practical Training Task 5		
4.3	Erect and dismantle cantilevered materials hoists.	Page 125, 127, 133-135		Question 40			

Contents

Element 1

Plan Job

This element covers performance criteria:

1.1 Task to be undertaken is assessed.

1.2 Potential workplace hazards are identified.

1.3 Hazard control measures are identified consistent with appropriate standards to ensure the safety of personnel and equipment.

1.4 Site information is obtained.

1.5 All forces and loads associated with erecting and dismantling structures and associated plant are considered in consultation with appropriate personnel.

1.6 Rigging equipment and associated equipment are identified in consultation with appropriate personnel according to procedures and site information.

1.7 Safety equipment is identified.

1.8 Appropriate communication methods are identified with associated personnel.

Theory Training Task 2

Performance Criteria: 1.1

First, look at the picture and then plan your job. Your job is to get the crane operator to lift the load from the ground to the suspended floor.

Find out where the job is. To do this task you need to:

Performance Criteria: 1.2

Identify workplace hazards

What is a hazard? A hazard is anything that can hurt you or others while you work. The government classes rigging as high risk. By law, only a licensed person can do rigging work. The licence includes knowing what workplace hazards to look for— and the causes.

Theory Training Task 3

Performance Criteria: 1.2

Before starting any job on a worksite it is important you talk to appropriate people to find out about any site rules, procedures or policies that may affect the way you carry out your work. List three people you may need to check with about site hazards and issues related to working on a site.

1)

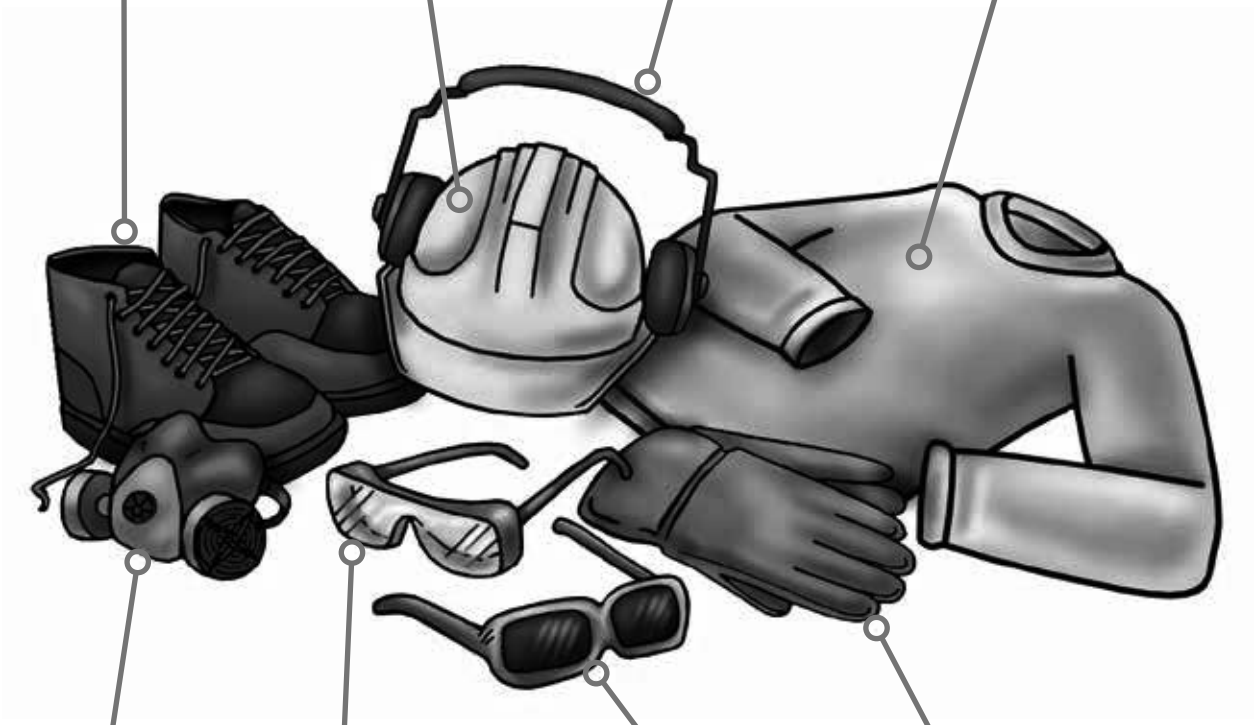
2)

3)

Theory Training Task 12

Performance Criteria: 1.3

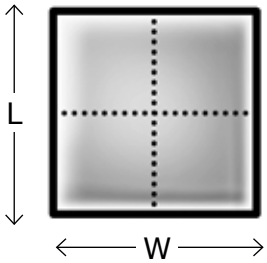
Label the personal protective equipment (PPE) shown below.



Theory Training Task 18

Performance Criteria: 1.4

Calculate the area of a square. A square is flat.
The area is how much space the square covers.

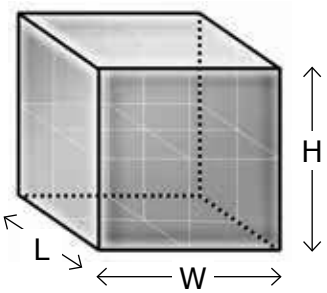


Formula: $A^2 = L \times W$

L = length W = width A = area (m^2)

a) Calculate the area of a square:
L = 9.5 cm W = 9.5 cm

Calculate the volume of a cube. A cube is a 3D box.
Volume is how much space is inside the cube.

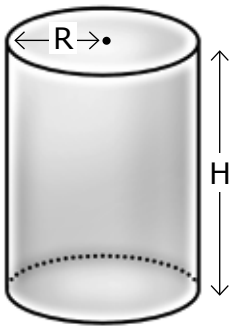


Formula: $V^3 = L \times W \times H$

L = length W = width H = height

b) Calculate the volume of a cube with these measurements:
L = 6.2 cm W = 6.2 cm H = 6.2 cm

Calculate the volume of a cylinder. A cylinder is a 3D pipe.
Volume is how much space is inside the cylinder.



Formula: $V^3 = \pi \times R \times R \times L$

π = 3.14 R = radius L = length V^3 = volume

c) Calculate the volume of a cylinder with these measurements:
R = 1.6 m L = 5 m

© Easy Guides Australia Pty Ltd

Performance Criteria: 1.7

Safety equipment

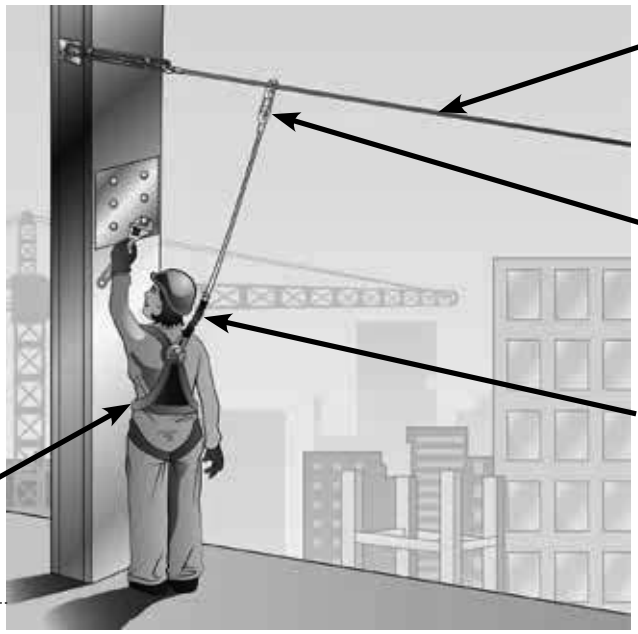
Use safety equipment to stay safe while you are doing the rigging work, especially when working at heights.

Theory Training Task 25

Performance Criteria: 1.7

It is important that you are familiar with the correct safety equipment used when performing rigging work, especially when working at heights.

a) Label the safety equipment in the following picture.



b) What other safety equipment might a rigger need to do their work?

© Easy Guides Australia Pty Ltd

Element 2

Select and Inspect Equipment

This element covers performance criteria:

2.1 Rigging equipment and associated equipment are selected and inspected according to procedures and the appropriate standard

2.2 Safety equipment is selected and inspected according to procedures

2.3 All defective rigging equipment, associated equipment and safety equipment is isolated, reported and recorded according to procedures

2.4 Communication equipment is selected and inspected for serviceability (where applicable).

Theory Training Task 29

Performance Criteria: 2.1

There are several 'rule of thumb' formulas for working out the working load limit (WLL) of slings.

The formula for working out the WLL of FSWR (flexible steel wire rope) is:
WLL (kgs) = Diameter² (mm) × 8

a) What is the WLL of a FSWR with a diameter of 25 mm? Show all calculations.

b) The formula for working out the WLL of Grade T (80) chain is:
WLL (kgs) = Diameter² (mm) × 32

What is the WLL of a Grade T (80) chain with a diameter of 12 mm? Show all calculations.

c) The formula for working out the WLL of fibre rope is:
WLL (kgs) = Diameter² (mm)

What is the WLL of a fibre rope with a diameter of 35 mm? Show all calculations.

Element 4

Erect Structures and Plant

This element covers performance criteria:

4.1 Structures and associated plant are erected according to procedures and site information

4.2 Stability of structures and associated plant is maintained during erection according to procedures

4.3 Work is conducted safely at heights including safe and effective use of safety equipment

4.4 Appropriate communication methods and communication equipment, are used to co-ordinate the tasks

4.5 Associated plant and rigging equipment is used according to procedures and the appropriate standard

4.6 Temporary guys, ties, propping and shoring, including flexible steel wire rope and tubing, are connected where required

4.7 Associated equipment is used in a safe and appropriate manner

4.8 The completed task is inspected according to the appropriate standard

4.9 Excess materials are removed from the work area (where applicable).

Performance Criteria: 4.3

Work Safely at Height

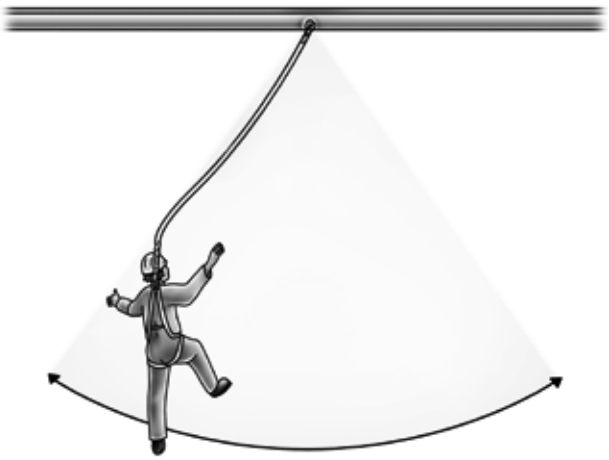
Make sure you are anchored correctly while working at heights.

Theory Training Task 62

Performance Criteria: 4.3

a) What is the pendulum effect?

b) What hazards are created by the pendulum effect?

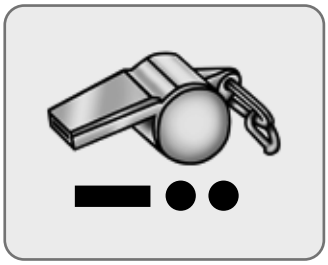


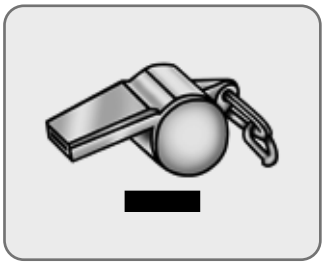
© Easy Guides Australia Pty Ltd

Theory Training Task 65

Performance Criteria: 4.4

Draw a line from the crane boom motion in the centre with the hand or whistle signal.





Hoisting down

Stop

Slewing right

Travel and traverse

Luffing boom up

Telescoping boom retract

© Easy Guides Australia Pty Ltd

Practical Training Task 5

Element 4—Erect Structures and Plant
Performance criteria 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9

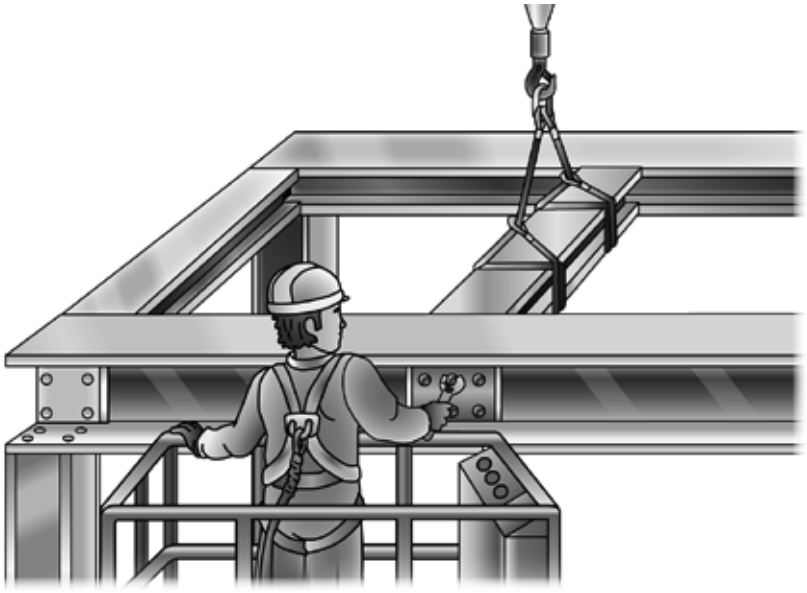
Erect Structures and Plant

Learners: You **must** do this task under the **control of a licensed operator**.
Please wait for your trainer to advise you before trying the task.

In Practical Task Three, you planned to set up a steel portal frame. You will now erect the steel portal frame.

First, your trainer will take you to an area where you will erect the steel portal frame.

Second, your trainer will choose the panels for you to erect the steel portal frame.



When you erect the steel portal frame, make sure you:

- ☐ Carry out rigging work. This means you do all rigging work in line with workplace procedures, user manuals and site information.
- ☐ Keep structures and plant stable. This means you use guying, lashing and bracing to keep structures stable while you are putting them up.
- ☐ Work safely at height. This means you make sure you anchor yourself correctly when working at heights.
- ☐ Use appropriate communication methods and equipment. This means you must give crane operators clear verbal, hand and whistle signals when you direct crane movements.
- ☐ Use associated plant and equipment according to procedures. This means you make sure someone has trained you to use the plant and rigging equipment the way the maker designed it.

© Easy Guides Australia Pty Ltd