higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

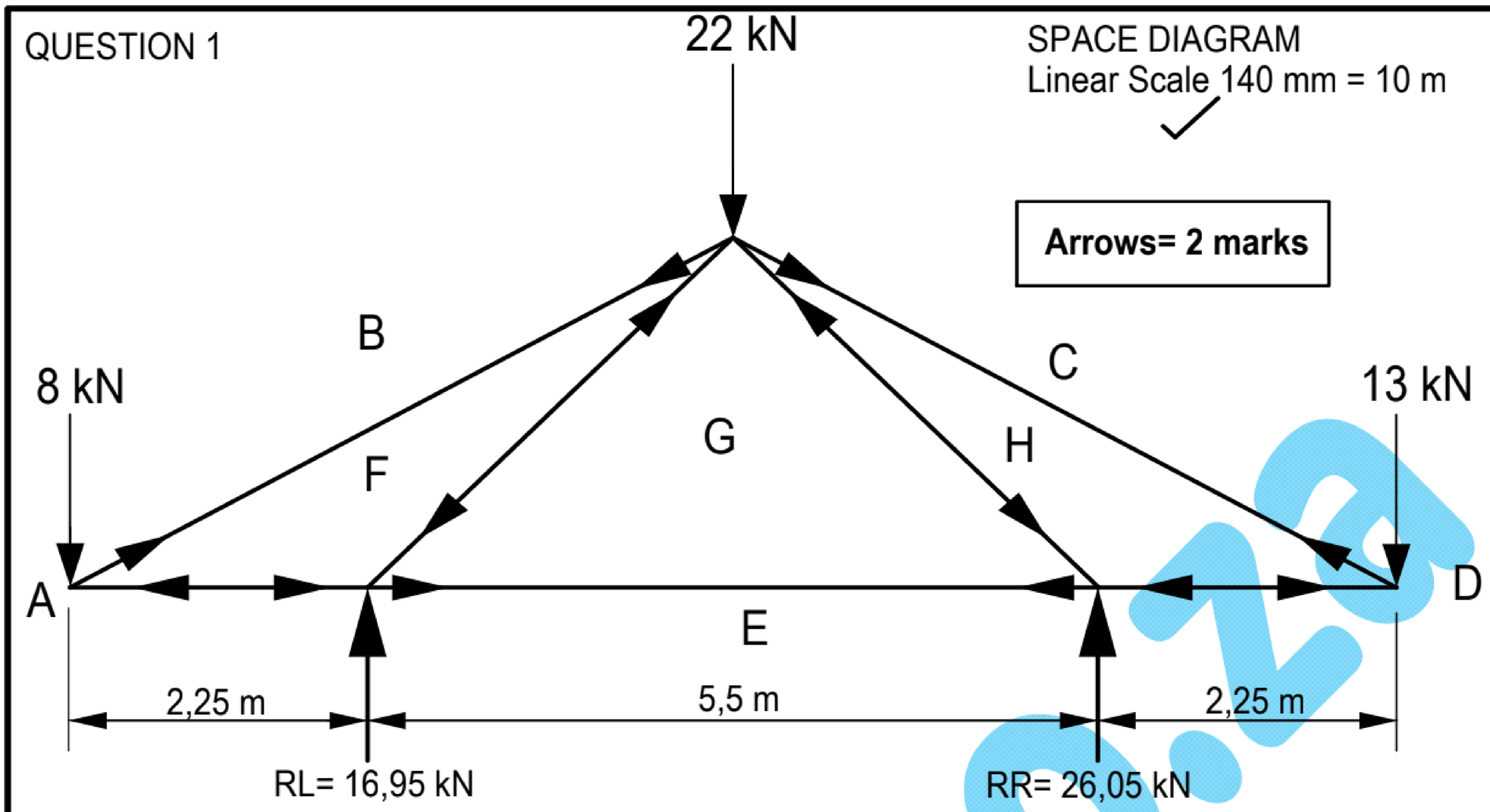
NATIONAL CERTIFICATE

BUILDING AND STRUCTURAL CONSTRUCTION N5

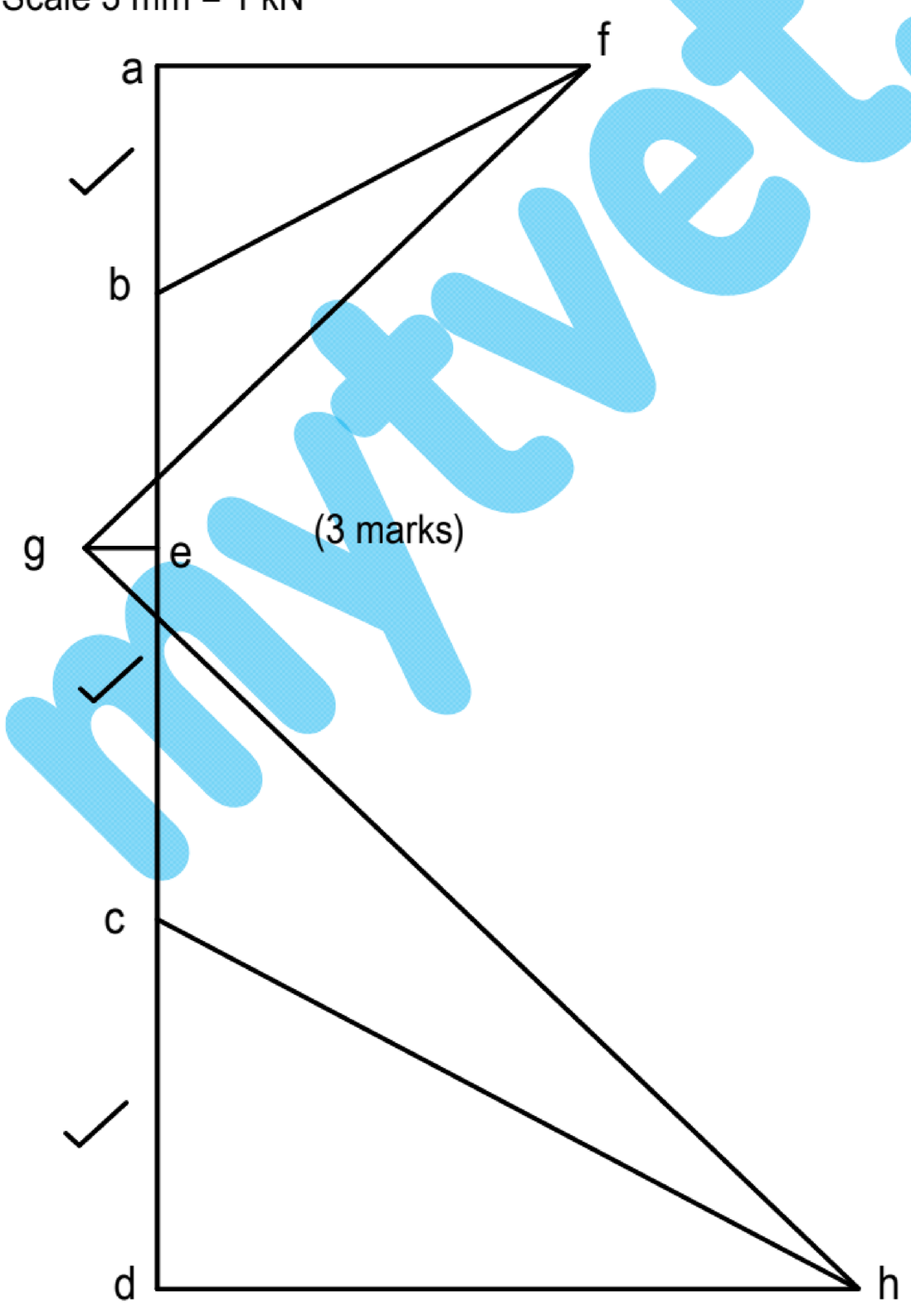
23 November 2020

This marking guideline consists of 10 pages.

QUESTION 1



Vector Diagram ✓
Scale 3 mm = 1 kN



(3 marks)

Calculate Reactions

Fulcrum RL

(RR x 5,5) + (8 x 2,25) = (13 x 7,75) + (22 x 2,75) ½

RR = 100,75 + 60,5 - 18 / 5,5

RR = 26,05 kN ✓

Fulcrum RR

(RL x 5,5) + (13 x 2,25) = (8 x 7,75) + (22 x 2,75) ½

RL = 62 + 60,5 - 29,25 / 5,5

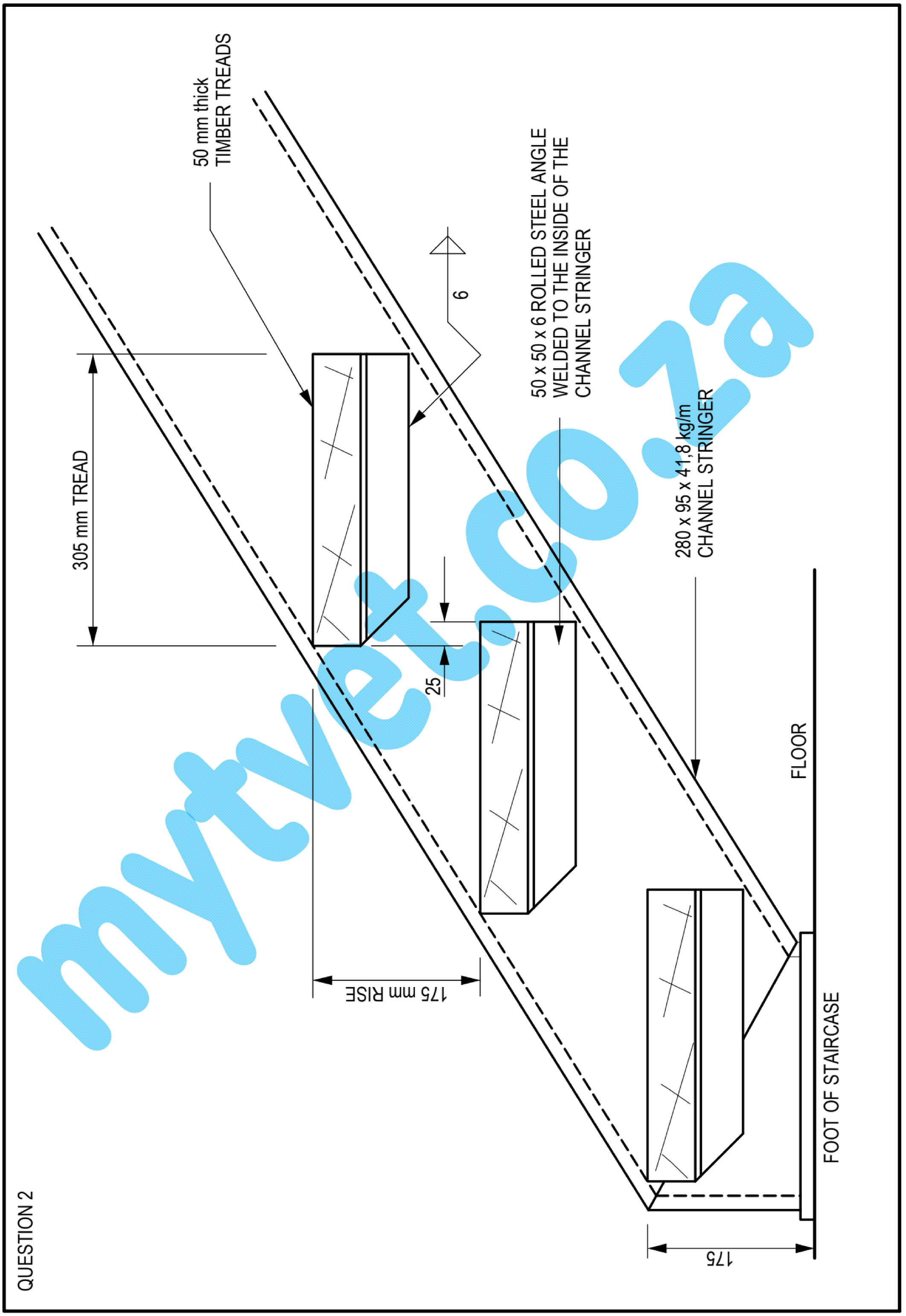
RL = 16,95 kN ✓

(3 marks)

MEMBER	TYPE	MAGNITUDE
BF	Tie	16 kN
CH	Tie	26 kN
DH	Strut	22,52 kN
GE	Tie	2,33 kN
AF	Strut	13,56 kN
FG	Strut	23,44 kN
GH	Strut	36 kN

(14 x 0,5 = 7 marks)

Total = 17 marks


50 mm thick
TIMBER TREADS
6
50 x 50 x 6 ROLLED STEEL ANGLE
WELDED TO THE INSIDE OF THE
CHANNEL STRINGER
305 mm TREAD
280 x 95 x 41,8 kg/m
CHANNEL STRINGER
25
FLOOR
175 mm RISE
FOOT OF STAIRCASE
175
QUESTION 2