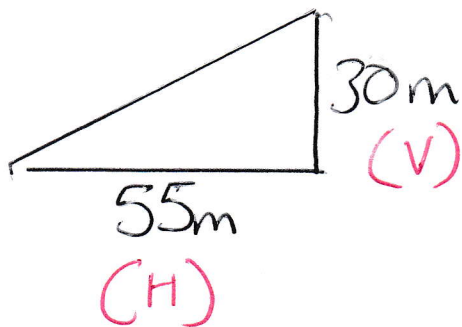


ES6 N5 Applications of Maths (Geometry & Measure)

Gradient

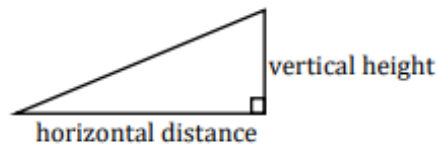
Worked Solutions Courtesy of Mr R. Milton

①



You are given the below in the exam:

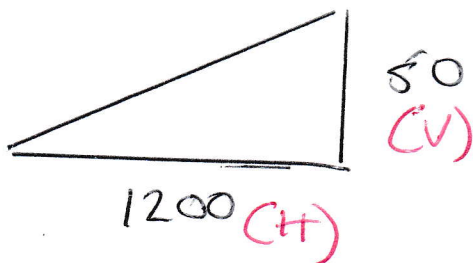
$$G = \frac{V}{H} = \frac{30}{55} \begin{matrix} \div 5 \\ \div 5 \end{matrix}$$



$$\text{gradient} = \frac{\text{vertical height}}{\text{horizontal distance}}$$

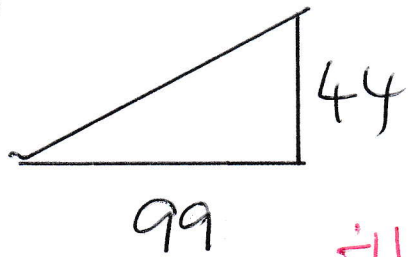
$$G = \frac{6}{11} \checkmark$$

②



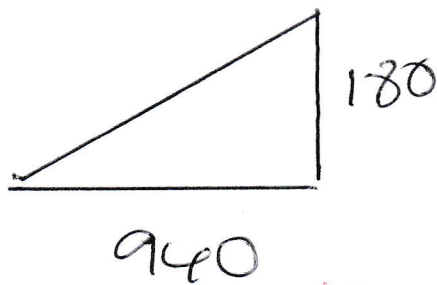
$$G = \frac{V}{H} = \frac{50}{1200} = \frac{5}{120} \checkmark = \frac{1}{24}$$

③



$$G = \frac{V}{H} = \frac{44}{99} = \frac{4}{9} \quad \checkmark$$

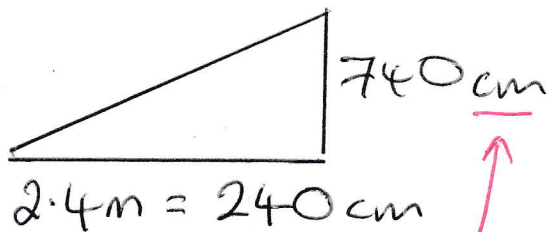
④



$$G = \frac{V}{H} = \frac{180}{940}$$

$$G = \frac{9}{47} \quad \checkmark$$

⑤

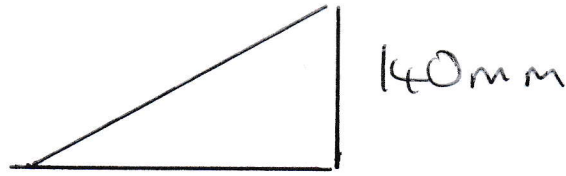


NOTE :-
KEEP UNITS
THE SAME.
(100cm = 1m)

$$G = \frac{V}{H} = \frac{740}{240}$$

$$G = \frac{37}{12} \quad \checkmark$$

⑥



68m = 680mm
(10mm = 1cm)

$$G = \frac{V}{H} = \frac{140}{680}$$

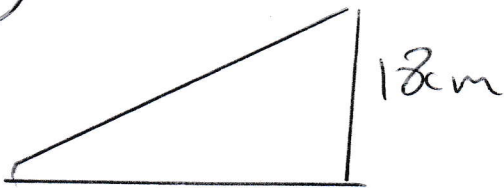
$\div 2$

$$= \frac{7}{34}$$

$\div 2$

✓

⑦



3m = 300cm
(100cm = 1m)

$$G = \frac{V}{H} = \frac{18}{300}$$

$\div 2$

$$= \frac{9}{150}$$

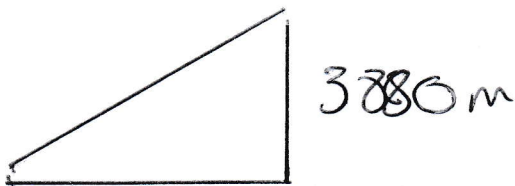
$\div 3$

$$= \frac{3}{50}$$

$\div 3$

✓

⑧



1.2km = 1200m
(1000m = 1km)

$$G = \frac{V}{H} = \frac{3880}{1200}$$

$\div 2$

$$= \frac{194}{60}$$

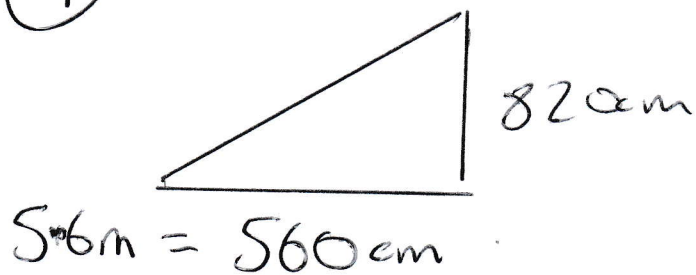
$\div 2$

$$= \frac{97}{30}$$

$\div 2$

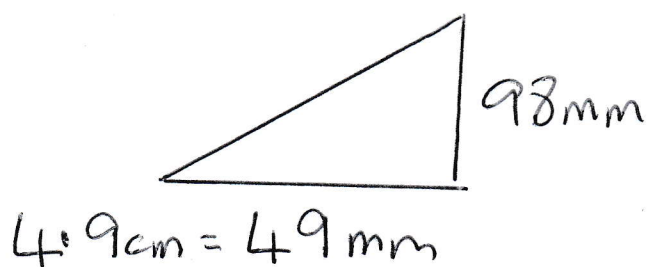
✓

(9)



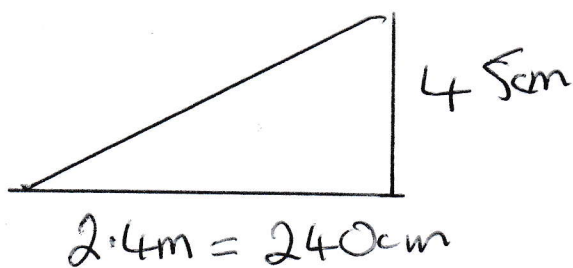
$$G = \frac{V}{H} = \frac{820}{560}$$
$$= \frac{41}{28} \checkmark$$

(10)



$$G = \frac{V}{H} = \frac{98}{49}$$
$$= 2 \checkmark$$

AQ



$$G = \frac{V}{H} = \frac{45}{240}$$
$$= \frac{9}{48} = \frac{3}{16}$$
$$= 0.1875$$

$$0.17 + \frac{10}{100} \times 0.17$$
$$= 0.17 + 0.017 = \underline{0.187}$$

RAMP IS NOT SAFE AS 0.1875 > 0.187 ✓