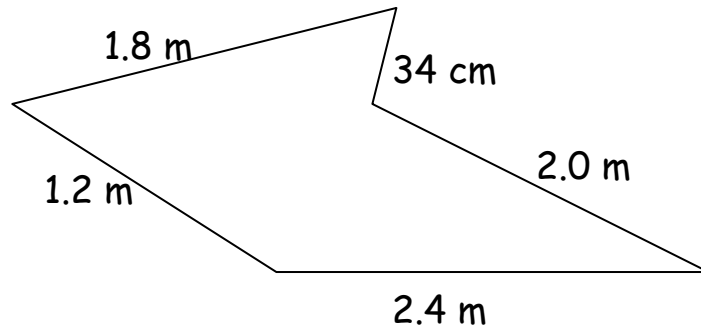


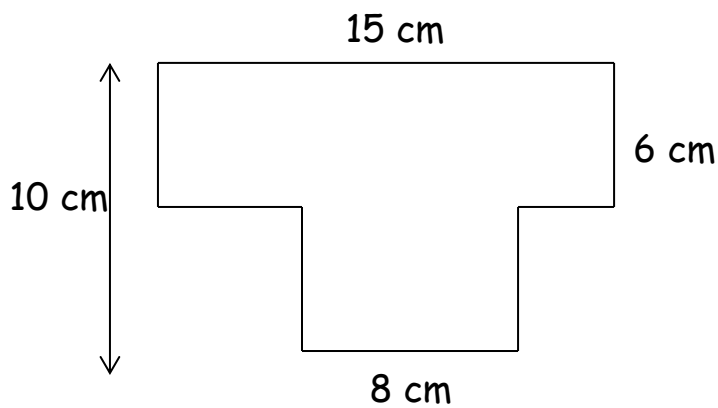
# National 4 Mathematics: Homework 12

## § 1 Revision

- 1 Calculate the perimeter of the following shape



- 2 Calculate the area of the shape below



- 3 Change the following measurements

- a) 5.2 cm to mm                      b) 970 cm to m  
c) 1.12 km to m                      d) 2 cm<sup>2</sup> to mm<sup>2</sup>

- 4 Multiply out the brackets

- (a)  $2(x - 4)$                       (b)  $5(a + 2b)$                       (c)  $7(2x + 4y)$

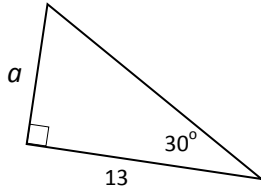
- 5 A new juice carton has been designed to hold 200cm<sup>3</sup>. If we know the length and breadth of the carton are both 5cm, how tall is the carton?

# National 4 Mathematics: Homework 12

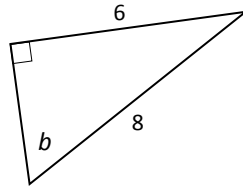
## § 2 Trigonometry

1 Find the angles and sides marked with letters.

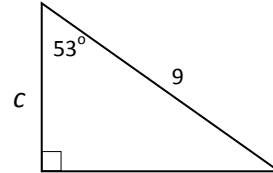
1.



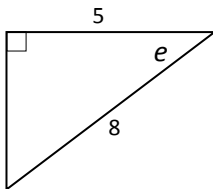
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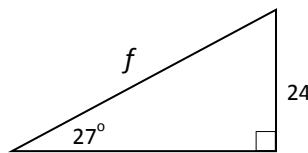
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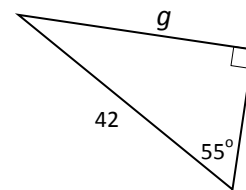
4.



5.

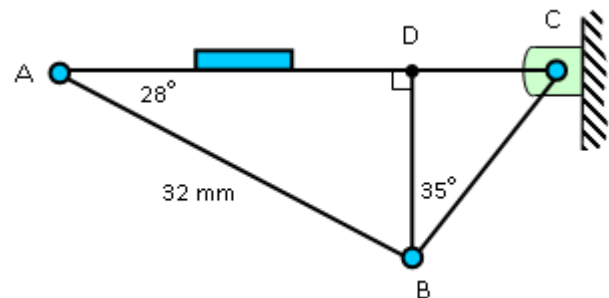


6.



2 The diagram opposite shows part of the framework for a small hinged bracket.

- Calculate the length of DB.
- Hence calculate the length of BC.



3 The diagram opposite represents a playground chute.

AC represents the slide and AB the stairs.

A local council ruling states "for a slide to be safe the **maximum** permissible angle between the slide and the ground is  $35^\circ$ ".

Does this diagram represent a "safe" slide?

