

TAURANGA GIRLS COLLEGE

YEAR 10 HOMEWORK SHEET

Series E Sheet 3

TGC Values: Respect, Participation, Pride

Name: _____

Due Date: _____



KEY SKILLS:

1. Write the number fifty and three tenths as a decimal

2. Round 56.372 to the nearest *tenth*

3. Write *fifty thousandths* a decimal

4. Complete this equivalent fraction
 $\frac{5}{6} = \frac{\quad}{24}$

5. Round $\sqrt{150}$ to 1dp.

6. What is the ratio of vowels to consonants in the word TELEPHONE

7. Divide \$85 in the ratio 2:3

8. What is the metric unit for energy?

9. 2.4m = _____ mm

10. What is the probability of rolling a one or a two on a die?

11. $v = 3(a - c)^2$

Find the value of v if a = 2 and c = -5

12. Write the rule linking x and y for this table:

x	1	2	3	4
y	3	9	15	21

y =

13. Expand $5(2a + 7c) =$

14. Simplify:

a) $3c \times 5c =$

b) $3c + 5d + 7c + d$

c) $c \times c \times c \times c \times c =$

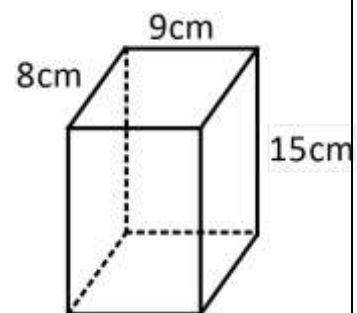
d) $\frac{12c}{4c} =$

15.

a) Name this shape

b) Find it's volume

c) Find it's surface area



Key Skills Total: _____ / 20

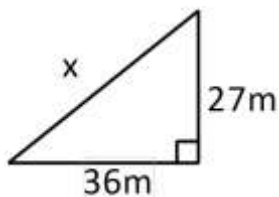
REVIEW and CURRENT WORK (CL 4 – 5): Trigonometry

PYTHAGORAS and TRIG REVIEW

Find the length of the side marked x.

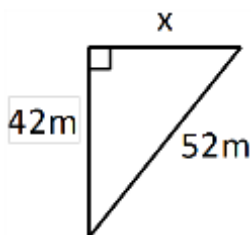
1. $x^2 =$

$x =$

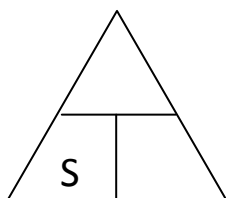
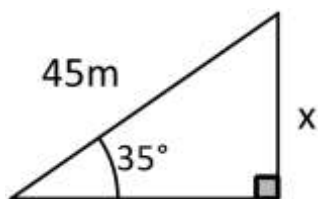


2. $x^2 =$

$x =$



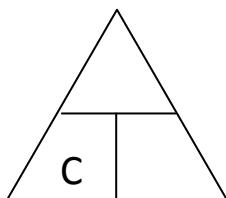
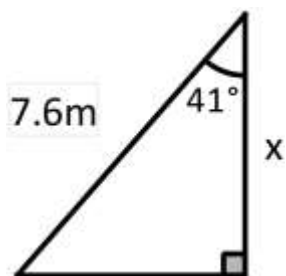
3.



$x = \dots\dots x \dots\dots$

$=$

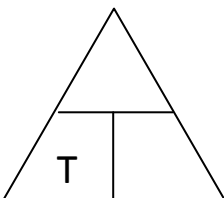
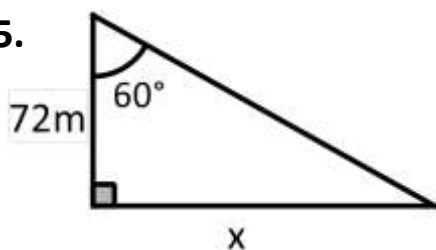
4.



$x = \dots\dots x \dots\dots$

$=$

5.



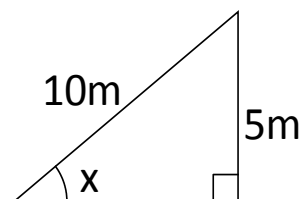
$x = \tan \dots\dots x \dots\dots$

$=$

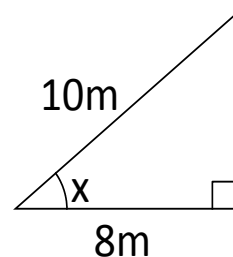
Finding Angles

Find the size of the angle marked x to the nearest degree.

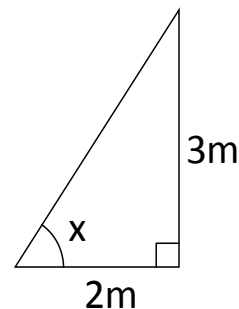
1 $\sin \theta = \frac{\text{Opp}}{\text{hyp}}$
 $\sin x =$
 $x = \sin^{-1}(\quad)$
 $x =$



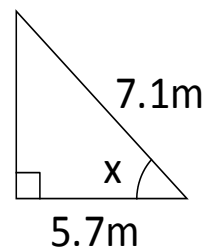
2 $\cos \theta =$
 $\cos x =$
 $x =$
 $x =$



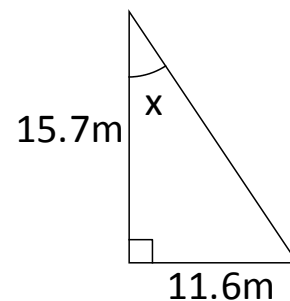
3 $\tan \theta =$
 $\tan x =$
 $x =$
 $x =$



4



5



Current Work CL4-5: ____ / 15

REVIEW and CURRENT WORK (CL 5 – 6): Trigonometry

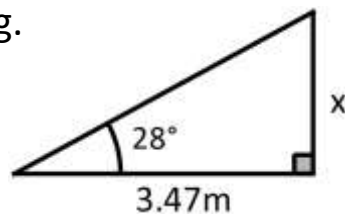
A. Review Question

Sam pay increased from \$560 to \$620 a week. What was the percentage increase in Sam's pay?

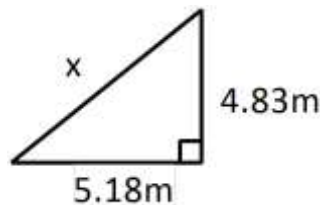
B. Pythagoras and Trig Review:

Find the length of the side marked x on these triangles. Show all working.

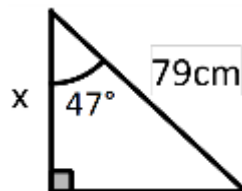
a)



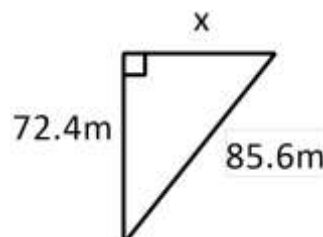
b)



c)



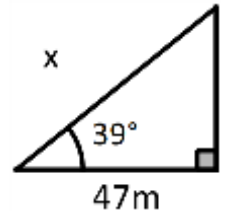
d)



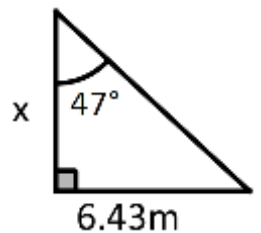
C. Trigonometry - Finding Angles and Other sides

Find the length of the side marked x on these triangles.

a)

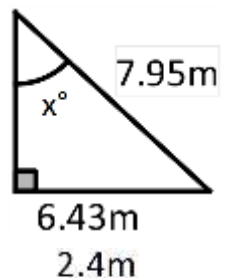


b)

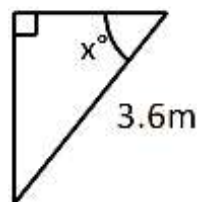


Find the size of the angle marked x to the nearest degree.

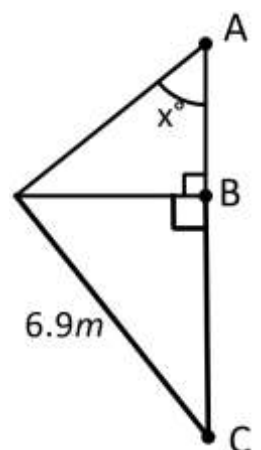
a)



b)



c) $AC = 9m$, $BC = 5.7m$



Current Work CL5-6: ____ /10

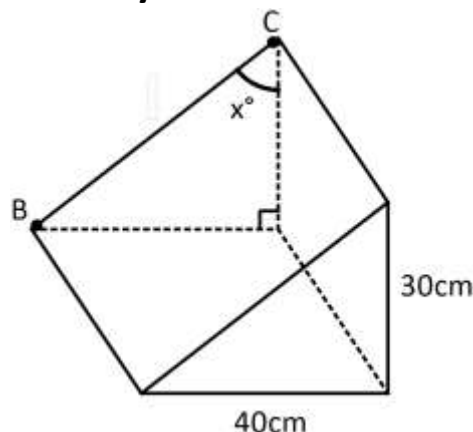
APPLICATIONS and TASKS

For each of these tasks you **must show your working**. Set out your solution in a clear and ordered manner. It is a good idea to draw a sketch for each situation.

Read the question carefully.

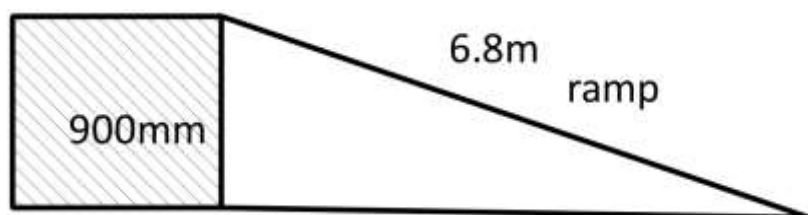
Task One (2 marks)

Find the length BC
and the size of the
angle x .



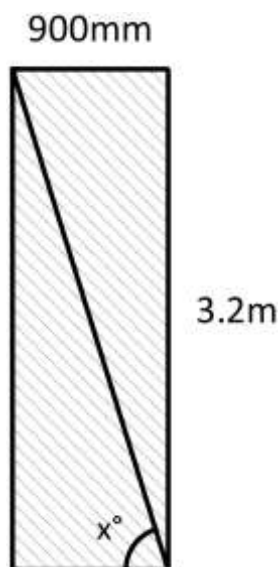
Task Two (2 marks)

A 6.8m ramp leads up to a platform that is 900mm high. Council regulations require that ramps for wheelchairs can be at no more than 10° . Is this ramp acceptable?



Task Three (2 marks)

A builder puts a diagonal brace in a rectangular frame which measures 900mm by 3.2m. What angle (marked x) does the brace make with the floor?



Applications Total: _____ / 6

Overall Results:

KS	CL4-5	CL5-6	APP	Parent Signature:
22	15	15	6	