TAURANGA GIRLS COLLEGE
YEAR 10 HOMEWORK SHEET
Series E Sheet 1
TGC Values: Respect, Participation, Pride

Name: _____

Due Date: _____

KEY SKILLS:

1. Write the number six and five tenths as a decimal

_____

2. Round 8.92 to the nearest *tenth*

_____

3. Write *five thousandths* a *decimal*

_____

4. Complete this equivalent fraction

$$\frac{5}{6} = \frac{\quad}{42}$$

5. Round $\sqrt{6.4}$ to 1dp.

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

7. Divide $25 in the ratio 1:4

8. What is the metric unit for liquid capacity?

9. 8.4 km = _____ m

10. What is the probability of rolling a six on a die?

11. v = 3a + 5c
Find the value of v if a = 7 and c = -4

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

x	1	2	3	4
y	4	7	10	13

y = ...

13. Simplify each of these expressions:

a) 4c + 7c =

b) 2c – 5c =

c) 6a + 8c + 5a + 7c =

d) 5a – 3c + 4a + 8c =

e) 7 x 5a =

f) 4a x 5c =

g) 4a x 5a =

h) c x c x c =
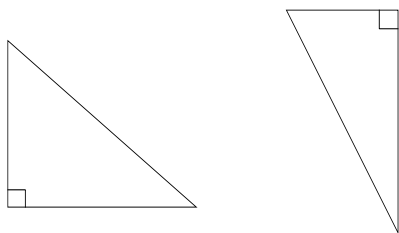
i) $\frac{15a}{5}$ =

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

Key Skills Total: _____ / 22

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

PYTHAGORAS

1 On each triangle below circle the hypotenuse
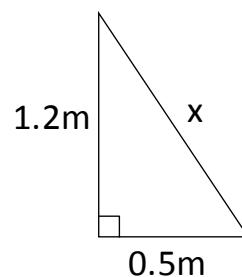
2. Use your calculator to find:

    a) 25^2 =

    b) 16^2 =

    c) $\sqrt{196}$ =

    d) $\sqrt{6.4}$ =

3. Complete this sentence:

Pythagoras' rule is used in a ……….

……………. triangle to find the

……………. of one side when the

length of …………………………

……………………… is known.
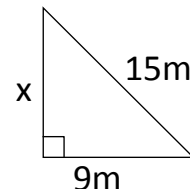
4. Find the length of the hypotenuse in each of these triangles:

x^2 = ……. + …….

    =

x = $\sqrt{}$

x =

20m 15m x

x^2 =

    =

x =

x =

36m 48m x

---

x^2 = ……. + …….

    =

x = $\sqrt{}$

x =

1.2m x 0.5m

Find the length of the "short side" in these triangles:

x^2 = 26^2 - …….

    =

x =

x =

26m x 10m

x^2 = ……. - …….

    =

x =

x =

x 2.8m 3.5m

x^2 = ……. - …….

    =

x =

x =

15m x 9m

Find the length of the side marked x.

x^2 =

    =

x =

x =

x 9m 12m

x^2 =

    =

x =

x =

x 20m 25m
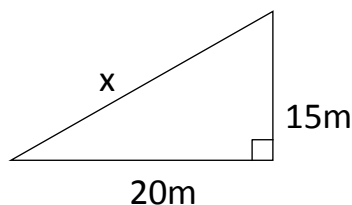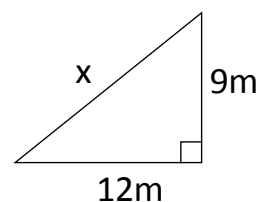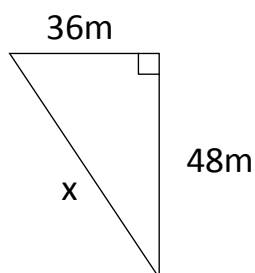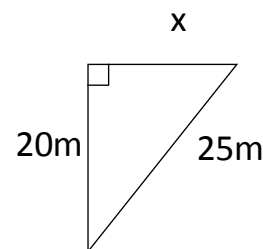
Current Work CL4-5: ___ / 15

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

A. Number and Algebra Review

1. What is the cost of an item marked $590 + GST

2. Janet saved $55 a week. If this is 30% of her weekly income, how much does she earn each week?

3. 84 people were participating in a golf tournament. If 23 were woman what percentage of men participated in the tournament?

4. Complete this table:

Ordinary form	Standard form
	2.45×10^6
0.000345	

5. Simplify:

a) $6a - 8c - a - 7c =$

b) $5h \times 2h \times 3h =$

c) $7h^3 \times 6h^8 =$

d) $\dfrac{15a^{20}}{20a^{10}} =$

e) $(2a^5)^4 =$

6. Expand and simplify
$5(3a + 5c) - 3(7a + 2c)$
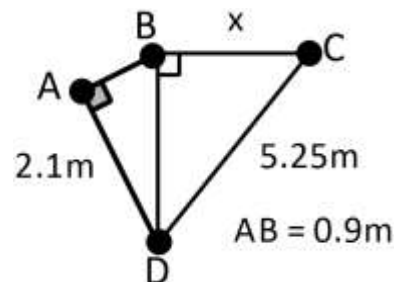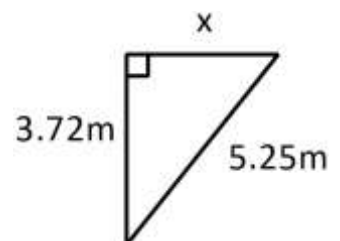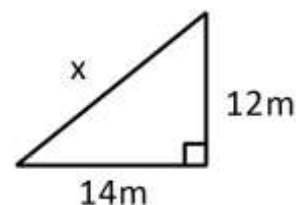
=

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Factorise: $25xy + 20y$

=

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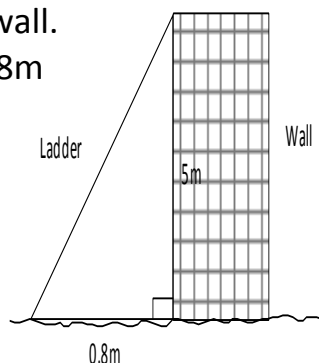

Current Work CL5-6: ____ /15

APPLICATIONS and TASKS

*For each of these tasks you **must show your working.** Set out your solution in a clear and ordered manner.* **Read the question carefully.**

Task One (2 marks)
A ladder reaches 5m up a wall. The foot of the ladder is 0.8m from the wall. How long is the ladder?
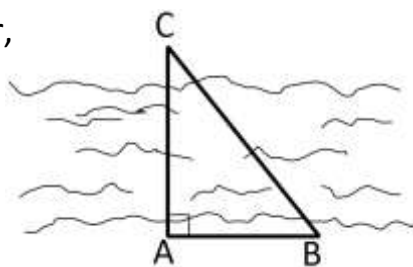
Ladder
Wall
5m
0.8m

Task Two (2 marks)
A rectangular field measures 45m by 70m. How much shorter is it to walk diagonally across the field compared to walking around the perimeter?

Task Three (2 marks)
A rope is put across a river, labelled AC on the diagram.
Find the length of the rope if AB = 22m and BC = 29m

C

A   B

Applications Total: _____ / 6

Overall Results:

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