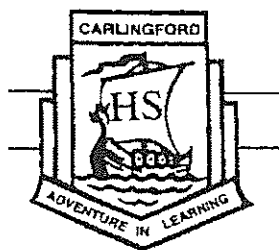


# Carlingford High School



## Mathematics

### Year 7 Term 3 Test

### 2018

Name: \_\_\_\_\_

Circle your class below.

Class:      7C          7A          7R          7L          7I          7N          7G

*Time allowed: 50 minutes*

- NO Calculators allowed.
- Complete the examination in blue or black pen.
- Show all necessary working.
- Attempt all questions.
- Extension questions are marked with an asterisk.

	Decimals	Length and Area	Algebra	Total	
Total	/18	/27	/26	/71	%

# Decimals (18 marks)

1. Write 78.345 correct to one decimal place.

78.3

1

2. Is the decimal 0.666666...

terminating or recurring?

1

Circle the correct word.

3. Evaluate:

a.  $4.33 +$

$$\begin{array}{r} 1.68 \\ 6.01 \end{array}$$

b.  $8 \times 0.25 =$  2

c.  $(0.5)^2 =$  0.25

d.  $4.25 \times$

$$\begin{array}{r} 0.6 \\ 2.55 \end{array}$$

4. Evaluate:

a.  $0.75 \div 3 =$  0.25

\_\_\_\_\_

b.  $0.45 \div 0.9 =$  0.5

5. Convert  $\frac{4}{5}$  to a decimal.

0.8

6. Write the following in descending order; (2 marks)

0.345, 4.12, 0.023, 1.24

4.12, 1.24, 0.345, 0.023

2

7. Celia bought a pen for \$1.70, an exercise book for \$2.50, and a pack of coloured pencils for \$4.95. (2 marks)

- a. Calculate the total cost of her purchase

$$\begin{array}{r} \$1.70 + \$2.50 + \$4.95 \\ = \$9.15 \end{array}$$

1

- b. What was her change from a \$10 note?

$$\$10 - \$9.15 = \$0.85$$

1

8. Petrol costs 139.9 cents per litre. If I put 40 L in my car's petrol tank, how much would I be charged in dollars and cents? (2 marks)

$$\$1.399 \times 40 =$$

$$\$55.96.$$

1

1

9. Ruth purchased wood to make a planter box for her garden. She purchased 4 pieces of wood that were each 1.2m long and 2 pieces of wood 0.8m long. If the cost of wood was \$8 per metre, what was the total cost of the wood for the planter box? (3 marks)

$$1.2 \times 4 = 4.8$$

1

$$\begin{array}{r} 0.8 \times 2 = 1.6 \\ 6.4 \times \$8 \end{array}$$

$$= \$51.20$$

1

18

## Length and Area (26 marks)

1. Match the abbreviation to its unit.

ha	<del>kilometre</del>
km	<del>centimetre</del>
cm	<del>square metre</del>
m <sup>2</sup>	<del>hectare</del>

2. Convert the following;

a. 5 km = 5 000 m

b. 1250 mm = 1.25 m

c. 12.5 ha = 125 000 m<sup>2</sup>

3. What unit would you use to measure the following?

a. Distance between Carlingford and Parramatta.

Kilometres

b. Area of a tiled floor in a kitchen.

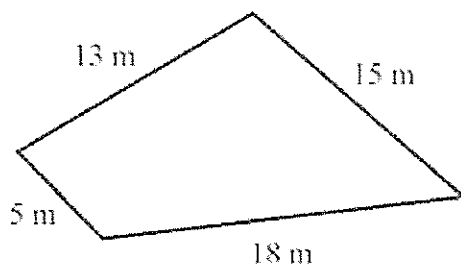
Square metres

c. The length of your pencil

Centimetres

4. Find the perimeter;

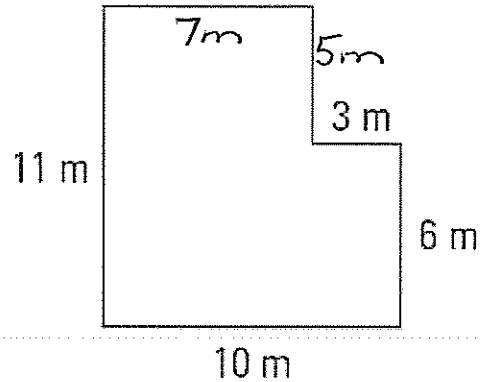
a.



$$P = 13 + 15 + 18 + 5$$

$$P = 41m$$

b. (2 marks)

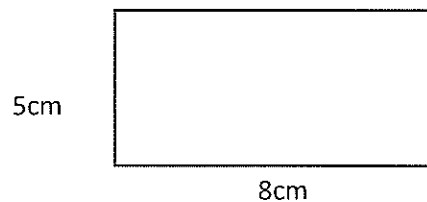


$$P = 11 + 7 + 5 + 3 + 6 + 10$$

$$P = 42m$$

7. Find the area of the following shapes.

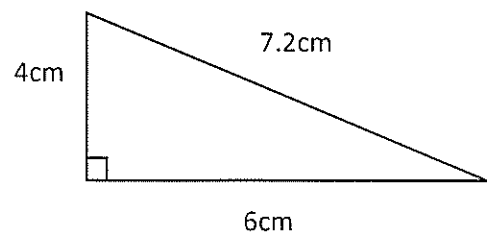
a. A rectangle with a length of 8cm and a width of 5cm.



$$A = 8 \times 5$$

$$A = 40 \text{ cm}^2$$

b. (2 marks)

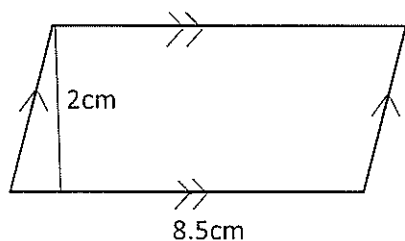


$$A = \frac{1}{2} \times 4 \times 6$$

$$A = 12 \text{ cm}^2$$

8. Find the Area of the following shapes.

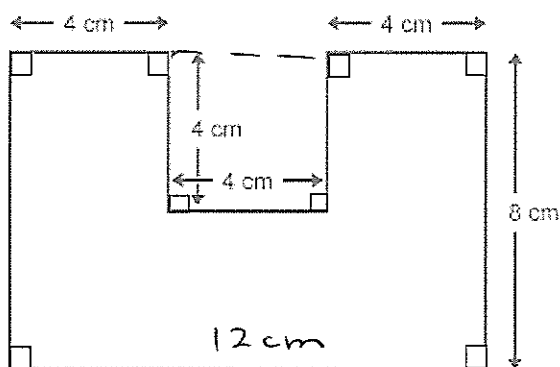
a.



$$A = 2 \times 8.5$$

$$A = 17\text{m}^2$$

b. (2 marks)



$$A = (8 \times 12) - (4 \times 4)$$

$$A = 96 - 16$$

$$A = 80\text{cm}^2$$

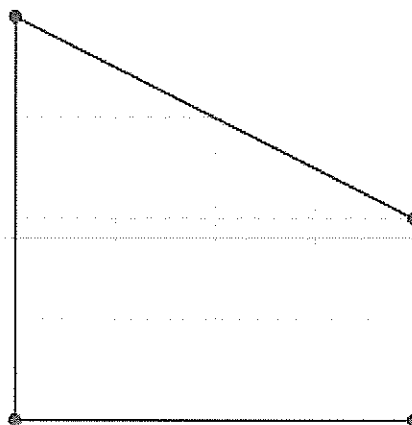
9. Use the words below to fill in the gaps. (4 marks)

{Area, Units, Length, Perimeter}

The distance around a shape is called the perimeter, whilst the space inside a shape is called the area. When making length and area calculations, the units must be the same.

10. Susan needs to put new tiles on her kitchen floor.

(3 marks)



a. What is the minimum number of tiles she needs to cover this area? Note: Tiles can be cut to fit.

12 tiles

b. If the tiles come in packs of 5, what is the minimum number of packs she will need to purchase?

3

c. If packs cost \$17.50 each, how much will it cost to buy the tiles?

$$\$17.50 \times 3$$

$$= \$52.50$$

# Algebra (27 marks)

1. Fill in the blanks;  
{Commutative, Distributive, Substitute, Coefficient, Pronumeral}
  - a. Pronumeral :- letters that represent numbers.
  - b. Commutative A law of arithmetic that says that numbers can be added or multiplied in any order.
  - c. Co-efficient:- the number at the front of a pro-numeral.
  - d. Substitute :- To replace a variable with a number.

2. Choose a pair of like terms.

$$2xy, -x, 4yx, 2x^2$$

$$2xy, 4yx$$

3. Simplify the following;

$$a. 2x + 5x = 7x$$

$$b. 6x \times 4y = 24xy$$

$$c. 2ab + a^2 - 4ab + 2a^2 =$$

(2 marks)

$$= 2ab - 4ab + a^2 + 2a^2$$

$$= -2ab + 3a^2$$

4. Write an expression for each of the following;

- a. The sum of  $x$  and  $y$ .

$$x + y$$

- b. The product of 5 and  $x$ .

$$5 \times x = 5x$$

- c. 5 divided by  $x$ .

$$5/x$$

- d. The cost of  $n$  pens at \$1.25 each.

$$\$1.25 \times n$$

$$\$1.25n$$

- e. The product of 5 and  $p$ , subtracted from 12.

$$12 - 5p \text{ or } 12 - 5 \times p$$

5. If  $x = 5, y = 2$  and  $z = -3$ .

Find the value of;

$$a. x - 5 = 5 - 5 = 0$$

$$b. 2y - 5 = 2 \times 2 - 5 = -1$$

$$c. 2z \div y = 2 \times -3 \div 2 = -6 \div 2 = -3$$

$$d. 3(x - z) = 3(5 - (-3)) = 3 \times 8 = 24$$

6. Expand and simplify;

$$a. 2(x - 4) = 2 \times x + 2 \times -4 = 2x - 8$$

$$b. -3(x + 2) = -3 \times x - 3 \times 2 = -3x - 6$$

7. Expand and simplify; (6 marks)

$$a. 4(x - 2) - 2x =$$

$$4x - 8 - 2x = 2x - 8$$

$$b. 2x - (x + 3) =$$

$$2x - x - 3 = x - 3$$

$$c. 4(3 - 2x) - 8 =$$

$$12 - 8x - 8 = 4 - 8x$$