




mathsquad		Year 7 Topic 4	Name:
Sample Homework Sheet Part 1		Due date:	
Step 1: Let's practice some skills from previous topics.			
1A. Calculate a. $8 + 1 = 9$ b. $3 - 2 = 1$	1B. Calculate a. $-3 - 2 = -5$ b. $-1 + 2 = 1$	1C. Calculate a. $-2 + -5 = -7$ b. $6 + -6 = 0$	1D. Calculate a. $-2 + -5 = -7$ b. $6 + -6 = 0$
2A. Calculate a. $5 \times 11 = 55$ b. $30 \div 10 = 3$	2B. Evaluate $6 + 15 \div 5$ $= 6 + 3 = 9$	2C. Evaluate $(2 + 7)^2$ $= 9^2 = 81$	2D. Evaluate $(2 + 7)^2$ $= 9^2 = 81$
3A. Substitute $x = 17$ into $x - 7$ and evaluate. $17 - 7 = 10$	3B. Substitute $x = 21$ into $\frac{x}{7}$ and evaluate. $\frac{21}{7} = 3$	3C. Substitute $x = 4$ into $8x + 4$ and evaluate. $8 \times 4 + 4 = 32 + 4 = 36$	3D. Substitute $x = 4$ into $8x + 4$ and evaluate. $8 \times 4 + 4 = 32 + 4 = 36$
4A. Solve the following: $x + 2 = 11$ $-2 - 2 = -4$ $x = 9$	4B. Solve the following: $\frac{9x}{9} = \frac{45}{9}$ $x = 5$	4C. Solve the following: $\frac{20}{4} = \frac{4(x-1)}{4}$ $5 = x - 1$ $+1$ $6 = x$	4D. Solve the following: $\frac{20}{4} = \frac{4(x-1)}{4}$ $5 = x - 1$ $+1$ $6 = x$
5A. State the grid reference of the circle below. 	5B. Plot the point A = (-2, 2) below and state the coordinates of point B. 	5C. The point C is reflected in the y axis. Plot C', the image of C, and state its coordinates. 	5D. The point C is reflected in the y axis. Plot C', the image of C, and state its coordinates.
2A. Calculate the area of the rectangle below. 	2B. To the nearest whole number, what is the area the shape below? 	2C. Calculate the area of the shape below by first expressing the area in a single calculation and then evaluating using line by line working. 	2D. Calculate the area of the shape below by first expressing the area in a single calculation and then evaluating using line by line working.

mathsquad		Year 7 Topic 4	Name:
Sample Homework Sheet Part 2		Due date:	
Step 1: Let's practice some skills from some previous topics.			
1A. What is the place value of the 6 in 0.36?	1B. Round 65.92 to 1 decimal place (1 dp).	1C. Insert <, = or > between the decimals. 2.516 < 2.8325	1D. Insert <, = or > between the decimals. 2.516 < 2.8325
2A. $850 \div 10 = 85$	2B. $0.6 \div 10 = 0.06$	2C. Evaluate $-211 + -194$	2D. Evaluate $-211 + -194$
3A. $478 + 1042$	3B. $6.75 - 2.88$	3C. Evaluate $-211 + -194$	3D. Evaluate $-211 + -194$
4A. 8×847	4B. 5.79×0.4	4C. Evaluate 4.96×14	4D. Evaluate 4.96×14
5A. a. $6 \div 6 = 1$ b. $60 \div 6 = 10$ c. $49 \div 9 = 5$ rem. 4	5B. $8544 \div 8$	5C. $1.88 \div 0.02$	5D. $1.88 \div 0.02$
6A. Convert 18% to a decimal. $18 \div 100 = 0.18$	6B. Calculate 70% of 40 $0.7 \times 40 = 28$	6C. Calculate 93.4% of 45 $0.934 \times 45 = 42.03$	6D. Calculate 93.4% of 45 $0.934 \times 45 = 42.03$
1A. Calculate the perimeter of the shape below. 	1B. Calculate the perimeter of the shape below. 	1C. Find the value of x by creating and solving an appropriate equation. 	1D. Find the value of x by creating and solving an appropriate equation.

Step 2: The Core Level Skills will be the main focus of Topic 4.			
Complete what you can each week with your best effort and watch your skills grow over time			
1A. $7^2 = 7 \times 7$ $= 49$	1B. $2^5 = 2 \times 2 \times 2 \times 2 \times 2$ $= 32$	1C. Substitute $r = 2$ into $11r^2$ and evaluate. 11×2^2 $= 11 \times 4$ $= 44$	
2A. List the first 4 positive multiples of 11 $11, 22, 33, 44$	2BI. Fill in the box to make the equation true. $3 \times \boxed{24} = 72$ $3 \overline{) 72}$	2BII. List the factors of 18 $1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \ 9 \ 10 \ 11 \ 12 \ 13 \ 14 \ 15 \ 16 \ 17 \ 18$ $1, 18, 2, 9, 3, 6$	2C. List the factors of 102 $1 \ 2 \ 3 \ 6 \ 17 \ 34 \ 51 \ 102$ $3 \overline{) 102}$ $1, 102, 2, 51, 3, 34, 6, 17$
3A. Circle the words that describe 18. odd <u>even</u> square	3B. Circle the words that describe 48. <u>even</u> square <u>mult. of 3</u> $3 \overline{) 48} \checkmark$	3C. Write 45 as a product of prime numbers, use powers if there are any repeated factors. $45 = 9 \times 5$ $= 3 \times 3 \times 5$ $= 3^2 \times 5$	
4A. Determine the LCM of 4 and 10. $4, 8, 12, 16, \textcircled{20}$ $10, \textcircled{20}$ $LCM(4, 10) = 20$	4B. Determine the HCF of 36 and 110. $36: \overset{1}{36} \ \overset{2}{18} \ \overset{3}{12} \ \overset{4}{9} \ \overset{5}{6}$ $110: \overset{1}{110} \ \overset{2}{55} \ \overset{3}{33} \ \overset{4}{22} \ \overset{5}{11}$ $HCF(36, 110) = 2$	4C. What is the prime factorisation of the LCM of $2^3 \times 5 \times 7$ and $3 \times 5 \times 7^2$? $2^3 \times 3 \times 5 \times 7^2$	
5A. Calculate $\sqrt{16}$ with the assistance of a multiplication grid. 4 because $4^2 = 16$	5B. $\sqrt{49} = 7$ because $7^2 = 49$	5C. Evaluate $\sqrt{2^4 \times 5^2 \times 7^2}$ $= 2^2 \times 5 \times 7$ $= 4 \times 35$ $= 140$	
Step 3: Complete these worded questions of increasing difficulty. You may use a calculator at any time.			
1. Zak has \$79, how much more money does he need to buy a bike worth \$145? $\begin{array}{r} 145 \\ - 79 \\ \hline 66 \end{array}$ Zak needs \$66 more	2. A brand of orange juice contains 194kJ of energy per 100mL. How many kilojoules of energy would be in a 250mL serve? $100 \text{ mL} = 194 \text{ kJ}$ $\div 2 \qquad \div 2$ $50 \text{ mL} = 97 \text{ kJ}$ $\times 5 \qquad \times 5$ $250 \text{ mL} = 485 \text{ kJ}$	3. Michael and Susan start counting at the same time and at the same speed. Michael counts forward by twos from 110, that is 110, 112, 114 etc. While Susan counts backwards by fives from 953, that is 953, 948, 943, etc. The two numbers they say at the same time which are closest together differ by how much? $953 - 110 = 843$ $843 \div 7 \approx 120$ $120 \times 2 = 240, \quad 110 + 240 = 350$ $120 \times 5 = 600, \quad 953 - 600 = 353$ Ans: 3	

Step 1: Let's practice some skills from some previous topics.

1A. What is the place value of the 9 in 5.2963?	1B. Round 0.2498 to 3 decimal places (3 dp.)	1C. Insert $<$, $=$ or $>$ between the decimals. 0.3 0.3000
2A. $80 \times 10 =$	2B. $24.72 \times 10 =$	2C. $5.9 \times 10^2 =$
3A. $3688 - 2031$	3B. $5.6 + 2.66$	3C. Evaluate $324 + -518$
4A. 291×3	4B. 0.03×3.65	4C. Evaluate 11×0.166
5A. a. $12 \div 12 =$ b. $55 \div 5 =$ c. $53 \div 8 =$ rem.	5B. $3596 \div 4$	5C. $2.5 \div 0.2$
		5CII. Solve $5(x + 12) = 422.5$
6A. Convert 85% to a decimal.	6B. Calculate 4% of 65	6C. Calculate 30% of 0.9
1A. Calculate the perimeter of the shape below. $P =$	1B. Calculate the perimeter of the shape below. $P =$	1C. Create and solve an equation to find the value of x. $x \text{ km}$ $P =$

Step 2: The Core Skills will be the focus of Topic 4. Give your best effort and watch your skills grow over time.			
1A. $1^2 =$		1B. $4^3 =$	
		1C.  Substitute $d = 3$ into $3d^2$ and evaluate.	
2A. List the first 7 positive multiples of 9		2BI.Fill in the box to make the equation true. $3 \times \square = 69$	2BII. List the factors of 45
			2C. List the factors of 145
3A. Circle the words that describe 27. odd even square		3B. Circle the words that describe 33. odd square mult. of 3	3C. Write 76 as a product of prime numbers, use powers if there are any repeated factors.
4A. Determine the LCM of 4 and 8.		4B. Determine the HCF of 48 and 12.	4C. What is the HCF of $3^3 \times 5^2 \times 7$ and $2 \times 3 \times 5 \times 7^2$?
5A. Calculate $\sqrt{0}$ with the assistance of a multiplication grid.		5B. $\sqrt{49} =$	5C. Evaluate $\sqrt{3^4 \times 7^2}$
Step 3: Complete these worded questions of increasing difficulty. You may use a calculator at any time.			
1.  In June 2011 the population in NSW was 7 303 700 and the population in Victoria was 5 624 100. How many more people lived in NSW than in Victora in June 2011?		2. A muffin recipe requires $\frac{2}{3}$ of a cup of milk to make 12 muffins. How many cups of milk are needed to make 30 muffins?	3.  What is the sum of all the four-digit numbers that can be obtained by using the digits 1, 2, 3 and 4 exactly once in each?

Step 1: Let's practice some skills from some previous topics.

1A. Calculate

a. $1 + 3 =$

b. $3 - 3 =$

1B. Calculate

a. $-4 - 3 =$

b. $-4 + 4 =$

1C. Calculate

a. $6 - -5 =$

b. $-1 + -6 =$


2A. Calculate


a. $2 \times 10 =$


b. $63 \div 7 =$


2B.  Evaluate $(17 - 5) \div 2$

2C.  Evaluate $15 - 2!$


3A.  Substitute $x = 4$ into $x + 5$ and evaluate.

3B.  Substitute $x = 64$ into $\frac{x}{8}$ and evaluate.


3C.  Substitute $x = 30$ into $\frac{x}{5} + 4$ and evaluate.

4A.  Solve the following:

$$x - 8 = 8$$

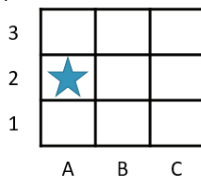
4B.  Solve the following:

$$\frac{x}{9} = 7$$

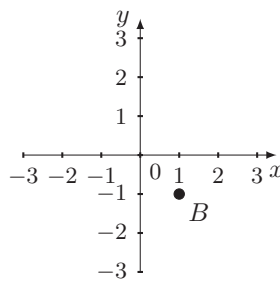
4C.  Solve the following:

$$3(x + 3) = 30$$

5A. State the grid reference of the star below.

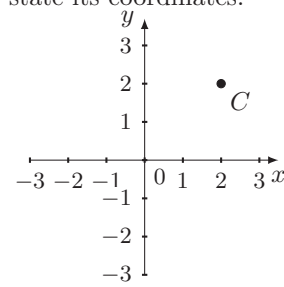


5B. Plot the point $A = (2, -2)$ below and state the coordinates of point B.




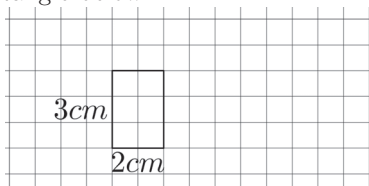
$B = (\quad , \quad)$

5C. The point C is reflected in the y axis. Plot C' , the image of C , and state its coordinates.




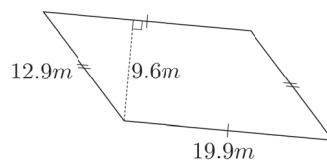
$C' =$

2A.  Calculate the area of the rectangle below.




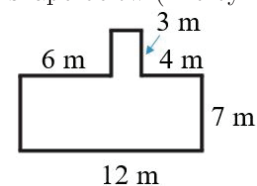
$A =$

2B.  To the nearest whole number, what is the area the shape below?







$A =$

2C.  Calculate the area of the shape below (line by line working).







$A =$

Step 2: The Core Skills will be the focus of Topic 4. Give your best effort and watch your skills grow over time.			
1A. $2^2 =$		1B. $2^1 =$	
		1C.  Substitute $c = 3$ into $12c^2$ and evaluate.	
2A. List the first 7 positive multiples of 12	2BI.Fill in the box to make the equation true. $3 \times \square = 60$	2BII. List the factors of 35	2C. List the factors of 134
3A. Circle the words that describe 22. odd even square	3B. Circle the words that describe 66. even square mult. of 2	3C. Write 70 as a product of prime numbers, use powers if there are any repeated factors.	
4A. Determine the LCM of 4 and 32.	4B. Determine the HCF of 32 and 40.	4C. What is the prime factorisation of the LCM of $2^5 \times 5^3$ and $2^4 \times 3 \times 5^2$?	
5A. Calculate $\sqrt{25}$ with the assistance of a multiplication grid.	5B. $\sqrt{0} =$	5C. Evaluate $\sqrt{2^{10}}$	
Step 3: Complete these worded questions of increasing difficulty. You may use a calculator at any time.			
1.  Billy had \$120. He bought a t-shirt that cost \$48. How much money did he have left?	2.  For which deal do you pay less per song; paying \$15 for 12 songs or paying \$18 for 16 songs?	3.  A computer is programmed to scan the digits of the counting numbers. For example if it scans 1 2 3 4 5 6 7 8 9 10 11 12 then it has scanned 15 digits. What is the last counting number scanned in a scan that begins at one and scans 1788 digits?	

Step 1: Let's practice some skills from some previous topics.

1A. What is the place value of the 8 in 1.85?		1B. Round 0.8507 to 2 decimal places (2 dp.)		1C. Insert $<$, $=$ or $>$ between the decimals. 0.5 0.36	
2A. $200 \times 10 =$		2B. $8.82 \div 10 =$		2C. $6.2 \div 10^4 =$	
3A. $569 + 1065$		3B. $4.78 + 3.5$		3C. Evaluate $115 - -288$	
4A. 4×634		4B. 4.7×0.05		4C. Evaluate 19×0.498	
5A. a. $60 \div 6 =$ b. $72 \div 12 =$ c. $42 \div 5 =$ rem.		5B. $7533 \div 3$		5C. $5.5 \div 0.4$	
				5CII. Solve $\frac{x+6}{10} = 0.79$	
6A. Convert 88% to a decimal.		6B. Calculate 40% of 43		6C. Calculate 42% of 490	
1A. Calculate the perimeter of the shape below. $P =$		1B. Calculate the perimeter of the shape below. $P =$		1C. Create and solve an equation to find the value of x . $P =$	

Step 2: The Core Skills will be the focus of Topic 4. Give your best effort and watch your skills grow over time.			
1A. $1^2 =$		1B. $2^6 =$	
		1C.  Substitute $j = 4$ into $5j^2$ and evaluate.	
2A. List the first 4 positive multiples of 9		2BI.Fill in the box to make the equation true. $2 \times \square = 70$	2C. List the factors of 243
		2BII. List the factors of 59	
3A. Circle the words that describe 8. odd even square		3B. Circle the words that describe 15. odd prime mult. of 3	3C. Write 36 as a product of prime numbers, use powers if there are any repeated factors.
4A. Determine the LCM of 6 and 7.		4B. Determine the HCF of 10 and 90.	4C. What is the HCF of $2^5 \times 5^3$ and $2^4 \times 3 \times 5^2$?
5A. Calculate $\sqrt{36}$ with the assistance of a multiplication grid.		5B. $\sqrt{49} =$	5C. Evaluate $\sqrt{2^6 \times 5^4}$
Step 3: Complete these worded questions of increasing difficulty. You may use a calculator at any time.			
1.  Justine is watching a DVD. She has already watch 53 minutes and has 42 minutes to go. What is the total duration of the DVD in minutes?		2.  Dale is a bee keeper. The mass of 500 millilitres of Dales honey is 0.7kg. How many litres is 3.5 kg of Dale’s honey?	3.  A normal duck has 2 legs, a lame duck has one and a sitting duck has none. There are 33 ducks with a total of 32 legs. The total number of normal ducks and lame ducks is twice the number of sitting ducks. How many lame ducks are there?

Step 1: Let's practice some skills from some previous topics.

1A. Calculate

a. $0 + 8 =$

b. $5 - 4 =$

1B. Calculate

a. $-4 + 3 =$

b. $-6 + 2 =$

1C. Calculate

a. $-6 + -5 =$

b. $-3 + -2 =$


2A. Calculate


a. $3 \times 4 =$


b. $27 \div 9 =$


2B.  Evaluate $5 + 6 \times 2$

2C.  Evaluate $\sqrt{26 - 10}$


3A.  Substitute $x = 12$ into $x - 8$ and evaluate.

3B.  Substitute $x = 8$ into $7x$ and evaluate.


3C.  Substitute $x = 30$ into $\frac{x+5}{7}$ and evaluate.

4A.  Solve the following:

$$x - 6 = 10$$

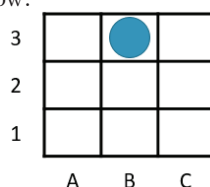
4B.  Solve the following:

$$6x = 48$$

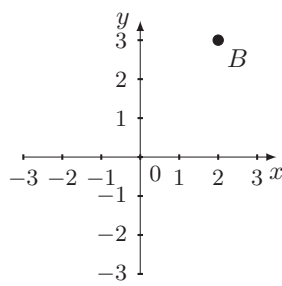
4C.  Solve the following:

$$2(x - 1) = 4$$

5A. State the grid reference of the circle below.

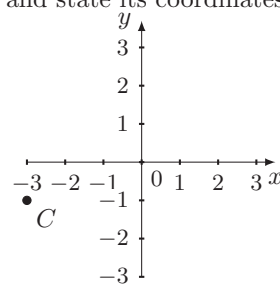


5B. Plot the point $A = (-3, 3)$ below and state the coordinates of point B.




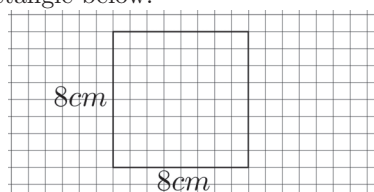
$B = (\quad , \quad)$

5C. The point C is translated 4 units to the right. Plot C' , the image of C , and state its coordinates.




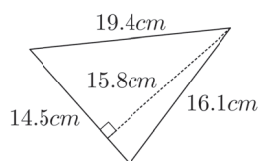
$C' =$

2A.  Calculate the area of the rectangle below.




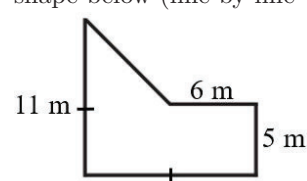
$A =$

2B.  To the nearest whole number, what is the area the shape below?
























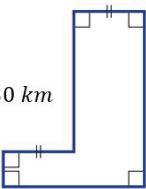
$A =$





2C.  Calculate the area of the shape below (line by line working).



$A =$

Step 2: The Core Skills will be the focus of Topic 4. Give your best effort and watch your skills grow over time.			
1A. $7^2 =$		1B. $0^3 =$	
		1C.  Substitute $d = 1$ into $(2d)^5$ and evaluate.	
2A. List the first 4 positive multiples of 5	2BI.Fill in the box to make the equation true. $3 \times \square = 87$	2BII. List the factors of 26	2C. List the factors of 116
3A. Circle the words that describe 6. odd even square	3B. Circle the words that describe 14. even prime mult. of 3	3C. Write 90 as a product of prime numbers, use powers if there are any repeated factors.	
4A. Determine the LCM of 7 and 6.	4B. Determine the HCF of 5 and 10.	4C. What is the prime factorisation of the LCM of $2^4 \times 3 \times 5^2$ and $2^5 \times 3^2 \times 7^3$?	
5A. Calculate $\sqrt{9}$ with the assistance of a multiplication grid.	5B. $\sqrt{49} =$	5C. Evaluate $\sqrt{2^8 \times 5^4}$	
Step 3: Complete these worded questions of increasing difficulty. You may use a calculator at any time.			
1.  There are 43 erasers and 28 scissors in the drawer. Sandy took 27 erasers from the drawer. How many erasers are now in the drawer?	2.  For which deal do you pay less per song; paying \$24 for 16 songs or paying \$20 for 12 songs?	3.  Of the numbers 1,2,...,1000, how many are divisible by neither 6 nor 9?	

		Year 7 Topic 4 Homework Sheet 5	Name: Due date:
Step 1: Let's practice some skills from some previous topics.			
1A. What is the place value of the 4 in 0.7418?	1B. Round 0.46312 to 2 decimal places (2 dp.)	1C. Insert <, = or > between the decimals. 5.62 5.736	
2A. $1600 \times 10 =$	2B. $16.04 \times 10 =$	2C. $0.5 \times 10^2 =$	
3A.  $1253 + 488$	3B.  $0.8 + 0.95$	3C.  Evaluate $-199 - -438$	
4A.  889×5	4B.  1.6×0.5	4C.  Evaluate 4.4×3.65	
5A. a. $22 \div 2 =$ b. $16 \div 2 =$ c. $89 \div 7 =$ rem.	5B.  $8160 \div 4$	5CI.  $0.5 \div 0.04$	5CII.  Solve $\frac{x}{5} + 9 = 20.64$
6A. Convert 60% to a decimal.	6B.  Calculate 2% of 40	6C.  Calculate 470% of 53	
1A.  Calculate the perimeter of the shape below.  $P =$	1B.  Calculate the perimeter of the shape below.  $P =$	1C.  Create and solve an equation to find the value of x .  $P =$	

Step 2: The Core Skills will be the focus of Topic 4. Give your best effort and watch your skills grow over time.			
1A. $2^2 =$		1B. $1^1 =$	
		1C.  Substitute $f = 2$ into $6f^2$ and evaluate.	
2A. List the first 6 positive multiples of 12	2BI.Fill in the box to make the equation true. $3 \times \square = 81$	2BII. List the factors of 55	2C. List the factors of 148
3A. Circle the words that describe 24. odd even square	3B. Circle the words that describe 19. even prime mult. of 2	3C. Write 9 as a product of prime numbers, use powers if there are any repeated factors.	
4A. Determine the LCM of 5 and 6.	4B. Determine the HCF of 10 and 90.	4C. What is the HCF of $2^4 \times 3 \times 5^2$ and $2^5 \times 3^2 \times 7^3$?	
5A. Calculate $\sqrt{100}$ with the assistance of a multiplication grid.	5B. $\sqrt{16} =$	5C. Evaluate $\sqrt{2^6 \times 7^2}$	
Step 3: Complete these worded questions of increasing difficulty. You may use a calculator at any time.			
1.  A country football game between the Cats and the Falcons was attended by 643 people. The Cats had 312 supporters. The rest supported the Falcons. How many people at the game supported the Falcons?	2.  George purchased 3 identical bags of lollies. After eating 5 lollies he still had 2 full bags and three quarters of the final bag remaining. How many lollies did he have in total when the three bags were full? A. 20 B. 40 C. 60 D. 80	3.  A builder needs 10 000 bricks to finish a job. He is sure from long experience that no more than 7% of a load of bricks is broken on delivery. If bricks are sold only in lots of 100, what is the minimum number of bricks he should order to be sure of having enough to finish the job?	

Step 1: Let's practice some skills from some previous topics.

1A. Calculate

a. $4 + 6 =$

b. $8 - 2 =$

1B. Calculate

a. $-4 + 9 =$

b. $-3 + 6 =$

1C. Calculate


a. $-3 + -2 =$

b. $-3 - -2 =$


2A. Calculate


a. $11 \times 1 =$


b. $2 \div 2 =$


2B.  Evaluate $44 \div (5 + 6)$

2C.  Evaluate $3^4 - 29$


3A.  Substitute $x = 8$ into $x + 10$ and evaluate.

3B.  Substitute $x = 9$ into $10x$ and evaluate.


3C.  Substitute $x = 6$ into $9x - 50$ and evaluate.

4A.  Solve the following:

$$x + 5 = 11$$

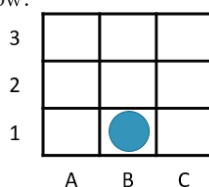
4B.  Solve the following:

$$2x = 12$$

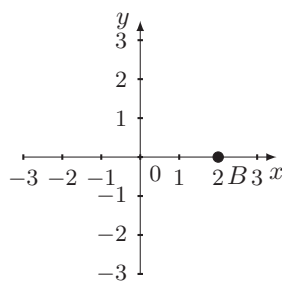
4C.  Solve the following:

$$9(x + 1) = 27$$

5A. State the grid reference of the circle below.

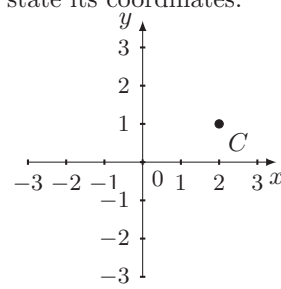


5B. Plot the point $A = (-2, 3)$ below and state the coordinates of point B.




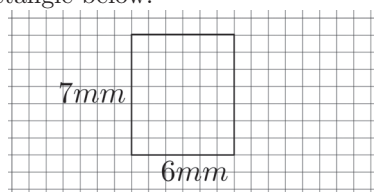
$B = (\quad , \quad)$

5C. The point C is reflected in the y axis. Plot C' , the image of C , and state its coordinates.




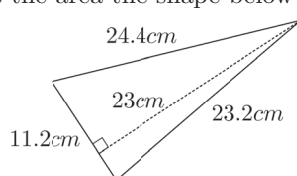
$C' =$

2A.  Calculate the area of the rectangle below.




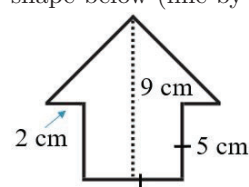
$A =$

2B.  To the nearest whole number, what is the area of the shape below?




















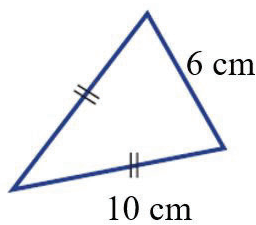

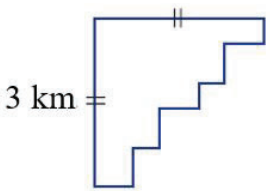

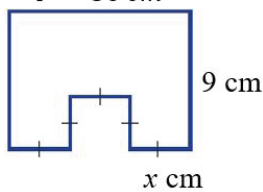
$A =$





2C.  Calculate the area of the shape below (line by line working).



$A =$

Step 2: The Core Skills will be the focus of Topic 4. Give your best effort and watch your skills grow over time.							
1A. $3^2 =$		1B. $0^4 =$		1C.  Substitute $o = 2$ into $(6o)^2$ and evaluate.			
2A. List the first 7 positive multiples of 10		2BI.Fill in the box to make the equation true. $3 \times \square = 87$		2BII. List the factors of 30		2C. List the factors of 138	
3A. Circle the words that describe 4. odd even square		3B. Circle the words that describe 22. even prime mult. of 2		3C. Write 58 as a product of prime numbers, use powers if there are any repeated factors.			
4A. Determine the LCM of 4 and 8.		4B. Determine the HCF of 6 and 18.		4C. What is the prime factorisation of the LCM of $3^3 \times 5^4 \times 7$ and $2 \times 3^2 \times 5$?			
5A. Calculate $\sqrt{1}$ with the assistance of a multiplication grid.		5B. $\sqrt{49} =$		5C. Evaluate $\sqrt{3^4 \times 5^2 \times 7^2}$			
Step 3: Complete these worded questions of increasing difficulty. You may use a calculator at any time.							
1.  6750 tonnes of material for making a road is dropped at 25 locations along a highway. An equal amount is dropped at each location. How much is left at each location?		2.  Hayley is building a brick wall that is 6 metres long. The length of a row of 18 bricks is 4.5 metres. How many bricks will Hayley need for a row 6 metres long?		3.  In how many different ways may a row of four "on-off" switches be set if no two adjacent switches may be off?			

		Year 7 Topic 4 Homework Sheet 7		Name: Due date:	
Step 1: Let's practice some skills from some previous topics.					
1A. What is the place value of the 8 in 2.581?		1B. Round 0.23 to 1 decimal place (1 dp.)		1C. Insert $<$, $=$ or $>$ between the decimals. 0.6 0.85	
2A. $7800 \times 10 =$		2B. $29.91 \div 10 =$		2C. $40 \div 10^4 =$	
3A.  $1069 - 797$		3B.  $4.9 + 1.95$		3C.  Evaluate $-574 + -547$	
4A.  6×135		4B.  0.06×1.67		4C.  Evaluate 2.4×56.8	
5A. a. $40 \div 5 =$ b. $25 \div 5 =$ c. $85 \div 12 =$ rem.		5B.  $8382 \div 3$		5C.  $3.85 \div 0.4$	
				5CII.  Solve $\frac{x-5}{2} = 0.34$	
6A. Convert 83% to a decimal.		6B.  Calculate 9% of 45		6C.  Calculate 91.8% of 2.6	
1A.  Calculate the perimeter of the shape below.  $P =$		1B.  Calculate the perimeter of the shape below.  $P =$		1C.  Create and solve an equation to find the value of x . $P = 50 \text{ cm}$  $P =$	

Step 2: The Core Skills will be the focus of Topic 4. Give your best effort and watch your skills grow over time.			
1A. $10^2 =$		1B. $1^5 =$	
		1C.  Substitute $t = 2$ into $(5t)^4$ and evaluate.	
2A. List the first 5 positive multiples of 7		2BI.Fill in the box to make the equation true. $3 \times \square = 90$	2BII. List the factors of 47
			2C. List the factors of 238
3A. Circle the words that describe 2. odd even square		3B. Circle the words that describe 44. odd prime mult. of 2	3C. Write 87 as a product of prime numbers, use powers if there are any repeated factors.
4A. Determine the LCM of 3 and 9.		4B. Determine the HCF of 8 and 40.	4C. What is the HCF of $3^3 \times 5^4 \times 7$ and $2 \times 3^2 \times 5$?
5A. Calculate $\sqrt{144}$ with the assistance of a multiplication grid.		5B. $\sqrt{25} =$	5C. Evaluate $\sqrt{2^2 \times 5^2 \times 7^2}$
Step 3: Complete these worded questions of increasing difficulty. You may use a calculator at any time.			
1.  John’s netball team scored 6 goals in the first quarter, 8 in the second, 11 in the third and 2 in the final. What was the total number of goals scored by John’s team?		2.  Jane bought two full identical bags of sand. After using $\frac{1}{3}$ of one bag she had 35kg of sand left. How many kilograms were in one full bag of sand?	3.  A woman has three school aged children. The product of her age and the age of the three children is 16 555. What is the difference in age of her eldest and youngest child?

Step 1: Let's practice some skills from some previous topics.

1A. Calculate

a. $0 + 9 =$

b. $6 - 2 =$

1B. Calculate

a. $1 - 3 =$

b. $-2 - 3 =$

1C. Calculate

a. $-2 + -6 =$

b. $-6 + -4 =$


2A. Calculate


a. $7 \times 7 =$


b. $32 \div 4 =$


2B.  Evaluate $22 - 2 \times 6$

2C.  Evaluate $(8 - 2)^2$


3A.  Substitute $x = 7$ into $x + 10$ and evaluate.

3B.  Substitute $x = 72$ into $\frac{x}{8}$ and evaluate.


3C.  Substitute $x = 6$ into $\frac{x}{2} + 7$ and evaluate.

4A.  Solve the following:

$$x - 8 = 6$$

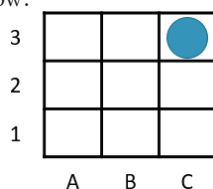
4B.  Solve the following:

$$2x = 18$$

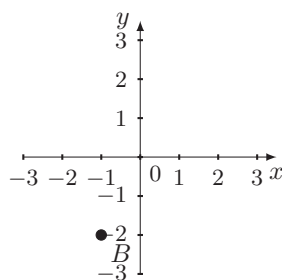
4C.  Solve the following:

$$9 = \frac{x}{9} + 1$$

5A. State the grid reference of the circle below.

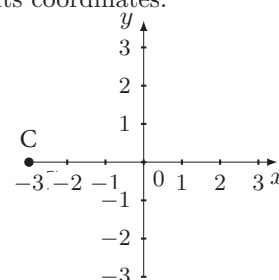


5B. Plot the point $A = (1, -1)$ below and state the coordinates of point B.




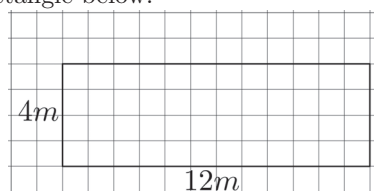
$B = (\quad , \quad)$

5C. The point C is translated 2 units down. Plot C' , the image of C , and state its coordinates.




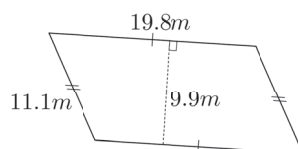
$C' =$

2A.  Calculate the area of the rectangle below.




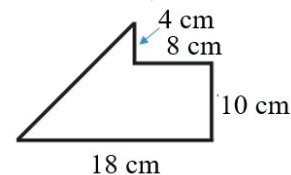
$A =$

2B.  To the nearest whole number, what is the area the shape below?







$A =$

2C.  Calculate the area of the shape below (line by line working).



$A =$

Step 2: The Core Skills will be the focus of Topic 4. Give your best effort and watch your skills grow over time.				
1A. $2^2 =$		1B. $3^1 =$		1C.  Substitute $h = 3$ into $4h^2$ and evaluate.
2A. List the first 4 positive multiples of 9	2BI.Fill in the box to make the equation true. $2 \times \square = 96$	2BII. List the factors of 53		2C. List the factors of 115
3A. Circle the words that describe 28. odd even square	3B. Circle the words that describe 11. odd prime mult. of 2	3C. Write 82 as a product of prime numbers, use powers if there are any repeated factors.		
4A. Determine the LCM of 4 and 6.	4B. Determine the HCF of 6 and 18.	4C. What is the prime factorisation of the LCM of $2^2 \times 3^3 \times 5 \times 7^4$ and 2×7^2 ?		
5A. Calculate $\sqrt{100}$ with the assistance of a multiplication grid.	5B. $\sqrt{81} =$	5C. Evaluate $\sqrt{2^4 \times 3^4 \times 5^2}$		
Step 3: Complete these worded questions of increasing difficulty. You may use a calculator at any time.				
1.  In a cricket game Australia were batting over 2 days. On the first day they scored 246 runs and on the second they scored 196 runs. How many runs did Australia make in total over the two days.	2.  A car is travelling at 60km/hr. Approximately how many metres is it covering every second? A. 17 B. 100 C. 170 D. 1000	3.  Consider all the numbers bigger than 8, which when divided by 2, by 3, by 4, by 5, by 6, by 7, and by 8, each time give a remainder of 1. What is the sum of the two smallest such numbers?		