

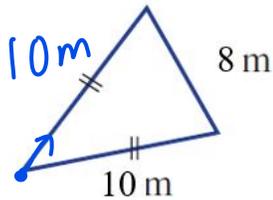
Year 7 Topic 2		Name:
Sample Homework Sheet		Due date:
<p>Step 1: Times tables are all interconnected. Use previous answers to help with questions as needed</p> <p>1. $10 \times 7 = 70$ 5. $10 \times 9 = 90$ 9. $2 \times 3 = 6$ 13. $2 \times 5 = 10$ 17. $2 \times 11 = 22$ 21. $3 \times 11 = 33$ 2. $1 \times 7 = 7$ 6. $11 \times 9 = 99$ 10. $4 \times 3 = 12$ 14. $3 \times 5 = 15$ 18. $10 \times 11 = 110$ 22. $8 \times 10 = 80$ 3. $2 \times 7 = 14$ 7. $9 \times 9 = 81$ 11. $8 \times 3 = 24$ 15. $6 \times 5 = 30$ 19. $12 \times 11 = 132$ 23. $6 \times 4 = 24$ 4. $0 \times 7 = 0$ 8. $5 \times 9 = 45$ 12. $7 \times 3 = 21$ 16. $7 \times 5 = 35$ 20. $8 \times 11 = 88$ 24. $7 \times 7 = 49$</p>		
<p>Step 2: Let's practice the skills from last topic.</p>		
Entry Level Skills	Core Level Skills	Enrichment Level Skills
<p>1A. Calculate</p> <p>a. $2 + 1 = 3$</p> <p>b. $6 - 3 = 3$</p> <p>2A. Calculate</p> <p>a. $7 \times 7 = 49$</p> <p>b. $8 \div 2 = 4$</p> <p>3A. Substitute $x = 7$ into $x + 10$ and evaluate.</p> <p>$x + 10$ $= 7 + 10$ $= 17$</p> <p>4A. Solve the following:</p> <p>$x + 2 = 4$ -2 $x = 2$</p>	<p>1B. Calculate</p> <p>a. $5 - 6 = -1$</p> <p>b. $-5 + 3 = -2$</p> <p>2B. Evaluate $4 \times (3 + 6)$</p> <p>$= 4 \times 9$ $= 36$</p> <p>3B. Substitute $x = 9$ into $5x$ and evaluate.</p> <p>$5x$ $= 5 \times 9$ $= 45$</p> <p>4B. Solve the following:</p> <p>$5x = 6 \times 5$ $x = 30$</p>	<p>1C. Calculate</p> <p>a. $-6 - 3 = -9$</p> <p>b. $5 - 6 = -1$</p> <p>2C. Evaluate 4×2^4</p> <p>$= 4 \times 16$ $= 64$</p> <p>3C. Substitute $x = 34$ into $\frac{x-2}{8}$ and evaluate.</p> <p>$\frac{34-2}{8}$ $= \frac{32}{8}$ $= 4$</p> <p>4C. Solve the following:</p> <p>$2x = \frac{x-1}{2} \times 2$ $x - 4 = 4$ $+4 + 4$ $x = 8$</p> <p>5C. The point C is reflected in the y axis. Plot C', the image of C, and state its coordinates.</p>
<p>5A. State the grid reference of the star below.</p> <p>B3</p>		

Step 3: The Core Level Skills will be the main focus of Topic 2.		
Complete what you can each week with your best effort and watch your skills grow over time		
<p>1A. What is the place value of the 6 in 0.36?</p> <p>hundreds</p>	<p>1B. Round 65.98 to 1 decimal place (1 dp).</p> <p>66.0</p>	<p>1C. Insert $<$, $=$ or $>$ between the decimals.</p> <p>$2.516 < 2.8325$</p>
<p>2A. $850 \div 10 = 85$</p> <p>3A. Evaluate $478 + 1042$</p> <p>478 $+ 1042$ $-----$ 1520</p>	<p>2B. Evaluate $0.16 \times 10^2 = 16.0$</p> <p>3B. Evaluate $6.75 - 2.88$</p> <p>6.75 $- 2.88$ $-----$ 3.87</p>	<p>2C. Evaluate $-211 + -194$</p> <p>-211 $+ -194$ $-----$ -405</p> <p>Ans: -405</p>
<p>4A. 8×847</p> <p>8 $\times 847$ $-----$ 6776</p>	<p>4B. Evaluate 5.79×0.4</p> <p>5.79 $\times 0.4$ $-----$ 2.316</p> <p>Ans: 2.316</p>	<p>4C. Evaluate 4.96×14</p> <p>4.96 $\times 14$ $-----$ 69.44</p> <p>Ans: 69.44</p>
<p>5A. a. $6 \div 6 = 1$</p> <p>b. $60 \div 6 = 10$</p> <p>c. $49 \div 9 = 5$ rem. 4</p>	<p>5B. $8544 \div 8$</p> <p>8 $\overline{)8544}$ 80 54 44 44 0</p> <p>Ans: 1068</p>	<p>5C. $1.92 \div 0.4$</p> <p>1.92 $\div 0.4$ $-----$ 4.8</p> <p>Ans: 4.8</p>
<p>6A. Convert 18% to a decimal.</p> <p>$18\% = 18 \div 100$ $= 0.18$</p>	<p>6B. Calculate 70% of 40</p> <p>$70\% \times 40$ $= 28$</p>	<p>6C. Calculate 93.4% of 4.5</p> <p>$93.4\% \times 4.5$ $= 4.203$</p>
<p>Step 4: Complete these worded questions of increasing difficulty. You may use a calculator at any time.</p>		
<p>1. There are 870 students at a school, and 480 of them are boys. If each classroom holds 30 students, how many classrooms are needed at the school?</p> <p>$870 \div 30$ $= 29$</p>	<p>2. Mikayla rode her bike for 42 seconds. She rode at a speed of 6 metres per second. How far did she ride?</p> <p>A. 7m B. 21m C. 126m D. 252m</p> <p>$42 \times 6 = 252$</p>	<p>3. The four digits 1, 9, 8 and 6 are each used to form two numbers, each of which is one, two or three digits. What is the largest possible product two such numbers can have?</p> <p>91 $\times 86$ $-----$ 7826</p>

Step 3: The Core Level Skills will be the main focus of Topic 3.

Complete what you can each week with your best effort and watch your skills grow over time.

1A. Calculate the perimeter of the shape below.

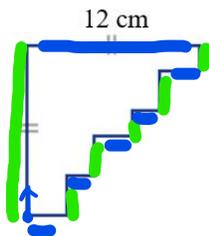


$$P = 10 + 8 + 10$$

$$= 18 + 10$$

$$= 28\text{m}$$

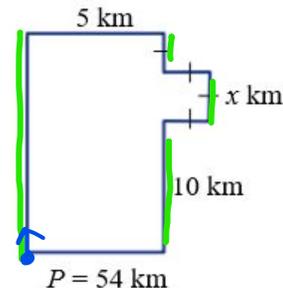
1B. Calculate the perimeter of the shape below.



$$P = 12 + 12 + 12 + 12$$

$$= 48\text{cm}$$

1C. Find the value of x by creating and solving an appropriate equation.



$$P = 54\text{ km}$$

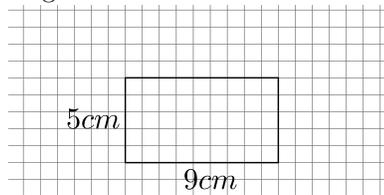
$$54 = 10 + 2x + 5 + 4x + 10 + 5$$

$$54 = 30 + 6x$$

$$24 = 6x$$

$$x = 4$$

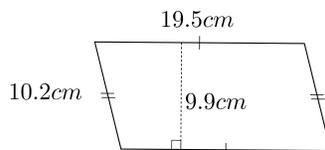
2A. Calculate the area of the rectangle below.



$$A = 5 \times 9$$

$$= 45\text{cm}^2$$

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



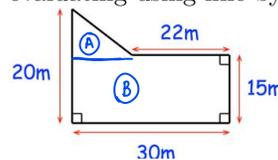
$$A = b \times h$$

$$= 19.5 \times 9.9$$

$$= 193.05$$

$$\approx 193\text{cm}^2$$

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.



$$A = \text{A} + \text{B}$$

$$= \frac{bh}{2} + lw$$

$$= \frac{8 \times 5}{2} + 30 \times 15$$

$$= 20 + 450$$

$$= 470\text{m}^2$$

Step 4: 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?

$$145 - 79$$

$$= \$66$$

2. A brand of orange juice contains 194kJ of energy per 100mL. How many kilojoules of energy would be in a 250mL serve?

$$100\text{mL} = 194\text{kJ}$$

$$\div 2 \quad \div 2$$

$$50\text{mL} = 97\text{kJ}$$

$$\times 5 \quad \times 5$$

$$250\text{mL} = 485\text{kJ}$$

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?

$$953 - 110 = 843$$

$$843 \div 7 \approx 120$$

$$120 \times 2 = 240, 110 + 240 = 350$$

$$120 \times 5 = 600, 953 - 600 = 353$$

Ans: 3

Step 1: Times tables are all interconnected. Use previous answers to help with questions as needed

- | | | | | | |
|---------------------|--------------------|--------------------|--------------------|---------------------|---------------------|
| 1. $10 \times 11 =$ | 5. $10 \times 8 =$ | 9. $2 \times 9 =$ | 13. $2 \times 2 =$ | 17. $2 \times 3 =$ | 21. $6 \times 5 =$ |
| 2. $1 \times 11 =$ | 6. $11 \times 8 =$ | 10. $4 \times 9 =$ | 14. $3 \times 2 =$ | 18. $10 \times 3 =$ | 22. $8 \times 10 =$ |
| 3. $2 \times 11 =$ | 7. $9 \times 8 =$ | 11. $8 \times 9 =$ | 15. $6 \times 2 =$ | 19. $12 \times 3 =$ | 23. $8 \times 4 =$ |
| 4. $0 \times 11 =$ | 8. $5 \times 8 =$ | 12. $7 \times 9 =$ | 16. $7 \times 2 =$ | 20. $8 \times 3 =$ | 24. $1 \times 1 =$ |

Step 2: Let's practice some skills from a previous topic.

Topic 1: Integers and Algebra

1A. Calculate

a. $3 + 2 =$

b. $9 - 7 =$

1B. Calculate

a. $-2 + 7 =$

b. $-4 + 1 =$

1C. Calculate

a. $-3 - -3 =$

b. $0 - -1 =$

2A. Calculate

a. $2 \times 8 =$

b. $0 \div 9 =$

2B. Evaluate $5 \times (11 - 5)$

2C. Evaluate $\sqrt{36 + 64}$

3A. Substitute $x = 7$ into $x + 4$ and evaluate.

3B. Substitute $x = 28$ into $\frac{x}{7}$ and evaluate.

3C. Substitute $x = 41$ into $\frac{x-5}{9}$ and evaluate.

4A. Solve the following:

$$x + 9 = 11$$

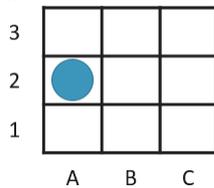
4B. Solve the following:

$$5x = 20$$

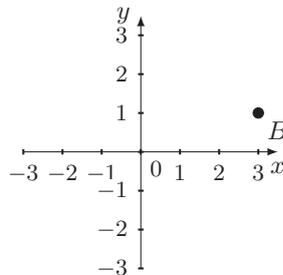
4C. Solve the following:

$$\frac{x+10}{8} = 2$$

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

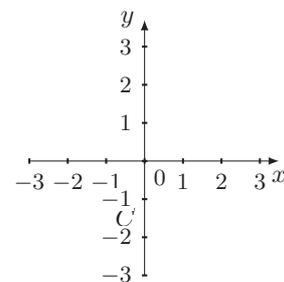


5B. Plot the point $A = (-3, 3)$ below and state the coordinates of point B.



$$B = (\quad , \quad)$$

5C. The point C is translated 3 units up. Plot C' , the image of C , and state its coordinates.

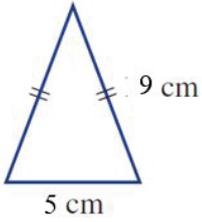


$$C' =$$

Step 3: The Core Level Skills will be the main focus of Topic 3.

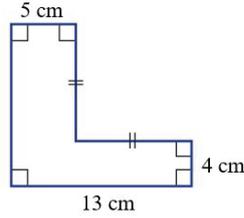
Complete what you can each week with your best effort and watch your skills grow over time.

1A.  Calculate the perimeter of the shape below.



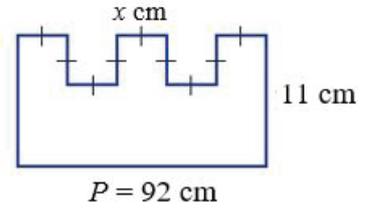
$P =$

1B.  Calculate the perimeter of the shape below.

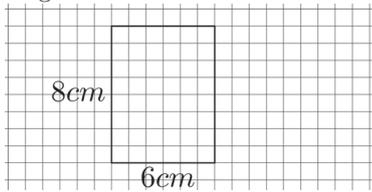


$P =$

1C.  Find the value of x by creating and solving an appropriate equation.

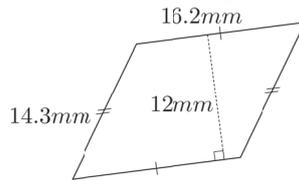


2A.  Calculate the area of the rectangle below.



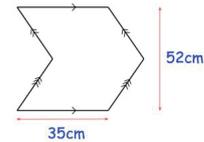
$A =$

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



$A =$

2C.  Calculate the area of the shape below by first expressing the area in a single calculation and then evaluating using line by line working.



$A =$

Step 4: Complete these worded questions of increasing difficulty. You may use a calculator at any time.

1.  Seventeen families arrive at Tullamarine airport, with 13 pieces of luggage per family. How many pieces of luggage are there in total?

2.  Evan's bed is 3 times longer than his desk. If his desk is 64cm long, what is the difference in length between the bed and the desk?

3.  Two candles have different lengths and thicknesses. The longer one can burn for 7 hours and the shorter one for 10 hours. After 4 hours' burning, both candles have the same length. What is the shorter candle's length divided by the longer candle's length?

Step 1: Times tables are all interconnected. Use previous answers to help with questions as needed

- | | | | | | |
|--------------------|--------------------|--------------------|--------------------|----------------------|---------------------|
| 1. $0 \times 3 =$ | 5. $10 \times 3 =$ | 9. $2 \times 7 =$ | 13. $2 \times 5 =$ | 17. $2 \times 10 =$ | 21. $3 \times 4 =$ |
| 2. $10 \times 3 =$ | 6. $11 \times 3 =$ | 10. $4 \times 7 =$ | 14. $3 \times 5 =$ | 18. $10 \times 10 =$ | 22. $6 \times 9 =$ |
| 3. $1 \times 3 =$ | 7. $9 \times 3 =$ | 11. $8 \times 7 =$ | 15. $6 \times 5 =$ | 19. $12 \times 10 =$ | 23. $12 \times 3 =$ |
| 4. $2 \times 3 =$ | 8. $5 \times 3 =$ | 12. $7 \times 7 =$ | 16. $7 \times 5 =$ | 20. $8 \times 10 =$ | 24. $2 \times 2 =$ |

Step 2: Let's practice some skills from a previous topic.

Topic 2: Decimals

1A. What is the place value of the 1 in 5.814?	1B. Round 0.052 to 1 decimal place (1 dp.)	1C. Insert $<$, $=$ or $>$ between the decimals. 0.4 0.457
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2A. $490 \div 10 =$

2B. $0.15 \div 10 =$

2C. $0.7 \div 10^3 =$

3A. $1437 + 473$

3B. $4.89 - 2.9$

3C. Evaluate $366 - -458$

4A. 383×8

4B. 0.02×1.6

4C. Evaluate 24×37.6

5A. a. $55 \div 5 =$

5B. $9342 \div 9$

5CI. $4.97 \div 0.4$

5CII. Solve $4(x + 7) = 332.8$

b. $44 \div 11 =$

c. $23 \div 7 =$ rem.

6A. Convert 41% to a decimal.

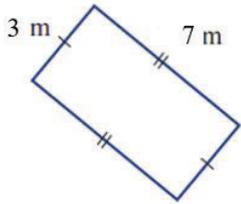
6B. Calculate 70% of 87

6C. Calculate 9.2% of 0.1

Step 3: The Core Level Skills will be the main focus of Topic 3.

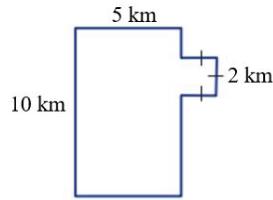
Complete what you can each week with your best effort and watch your skills grow over time.

1A.  Calculate the perimeter of the shape below.



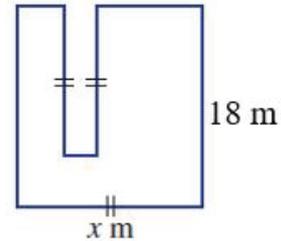
$P =$

1B.  Calculate the perimeter of the shape below.



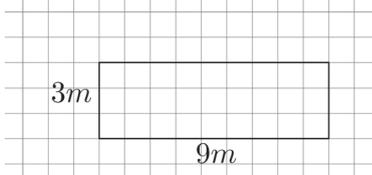
$P =$

1C.  Find the value of x by creating and solving an appropriate equation.



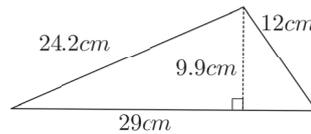
$P = 96 \text{ m}$

2A.  Calculate the area of the rectangle below.



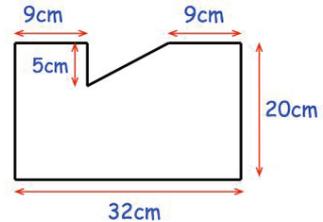
$A =$

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



$A =$

2C.  Calculate the area of the shape below by first expressing the area in a single calculation and then evaluating using line by line working.



$A =$

Step 4: Complete these worded questions of increasing difficulty. You may use a calculator at any time.

1.  Craig has three free-range hens named Jenny, Penny and Henny. In a six-month period, Jenny laid 87 eggs, Penny laid 37 eggs and Henny laid 152 eggs. How many eggs did the hens lay in total?

2.  A recipe requires 3 parts flour and 2 parts water. If 18 cups of water are used, how many cups of flour are required?

3.  How many four-digit positive integers have four different digits all non-zero, whose sum is 12?

Step 1: Times tables are all interconnected. Use previous answers to help with questions as needed

- | | | | | | |
|--------------------|--------------------|---------------------|--------------------|---------------------|----------------------|
| 1. $10 \times 2 =$ | 5. $10 \times 5 =$ | 9. $2 \times 11 =$ | 13. $2 \times 2 =$ | 17. $2 \times 2 =$ | 21. $8 \times 6 =$ |
| 2. $1 \times 2 =$ | 6. $11 \times 5 =$ | 10. $4 \times 11 =$ | 14. $3 \times 2 =$ | 18. $10 \times 2 =$ | 22. $12 \times 11 =$ |
| 3. $2 \times 2 =$ | 7. $9 \times 5 =$ | 11. $8 \times 11 =$ | 15. $6 \times 2 =$ | 19. $12 \times 2 =$ | 23. $4 \times 5 =$ |
| 4. $0 \times 2 =$ | 8. $5 \times 5 =$ | 12. $7 \times 11 =$ | 16. $7 \times 2 =$ | 20. $8 \times 2 =$ | 24. $1 \times 1 =$ |

Step 2: Let's practice some skills from a previous topic.

Topic 1: Integers and Algebra

1A. Calculate

a. $1 + 9 =$

b. $9 - 5 =$

1B. Calculate

a. $6 - 11 =$

b. $-6 + 5 =$

1C. Calculate

a. $-1 + -4 =$

b. $-1 + -2 =$

2A. Calculate

a. $10 \times 9 =$

b. $2 \div 2 =$

2B. Evaluate $27 - 4 \times 5$

2C. Evaluate $\sqrt{4 + 21}$

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

3B. Substitute $x = 45$ into $\frac{x}{5}$ and evaluate.

3C. Substitute $x = 2$ into $5x - 2$ and evaluate.

4A. Solve the following:

$$x + 8 = 18$$

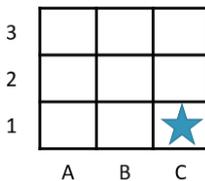
4B. Solve the following:

$$\frac{x}{8} = 7$$

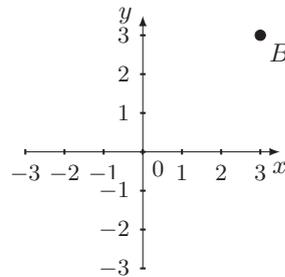
4C. Solve the following:

$$\frac{x+32}{9} = 8$$

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

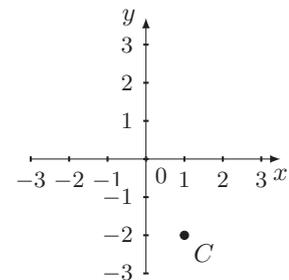


5B. Plot the point $A = (1, -1)$ below and state the coordinates of point B.



$B = (\quad , \quad)$

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

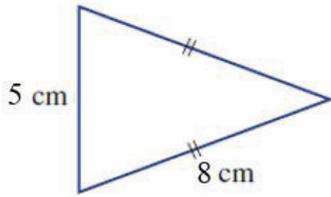


$C' =$

Step 3: The Core Level Skills will be the main focus of Topic 3.

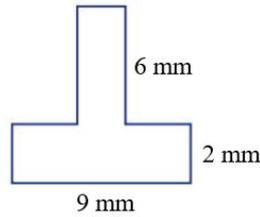
Complete what you can each week with your best effort and watch your skills grow over time.

1A.  Calculate the perimeter of the shape below.



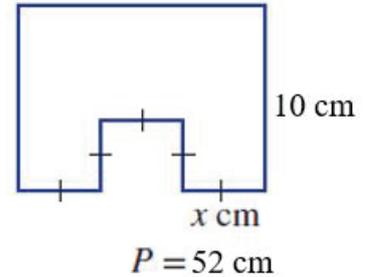
$P =$

1B.  Calculate the perimeter of the shape below.

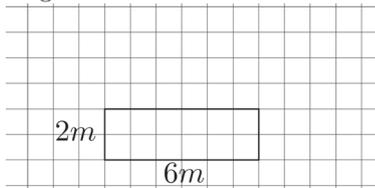


$P =$

1C.  Find the value of x by creating and solving an appropriate equation.

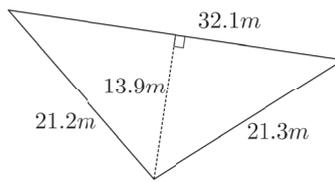


2A.  Calculate the area of the rectangle below.



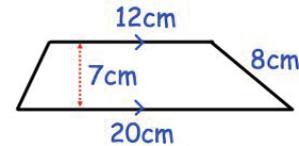
$A =$

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



$A =$

2C.  Calculate the area of the shape below by first expressing the area in a single calculation and then evaluating using line by line working.



$A =$

Step 4: Complete these worded questions of increasing difficulty. You may use a calculator at any time.

1.  Movie tickets cost \$16 per student. How much does it cost in total for a group of 32 students to go to the movies?

2. A motorbike uses 15 litres of petrol to travel 250km. How much petrol does it use to travel 100km?

3.  The sum of three numbers is 88. The first number decreased by 5, the second increased by 5 and the third multiplied by 5 are all equal. What is the difference between the largest and smallest of these three numbers?

Step 1: Times tables are all interconnected. Use previous answers to help with questions as needed

- | | | | | | |
|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| 1. $0 \times 11 =$ | 5. $10 \times 2 =$ | 9. $2 \times 6 =$ | 13. $2 \times 11 =$ | 17. $2 \times 5 =$ | 21. $3 \times 9 =$ |
| 2. $10 \times 11 =$ | 6. $11 \times 2 =$ | 10. $4 \times 6 =$ | 14. $3 \times 11 =$ | 18. $10 \times 5 =$ | 22. $6 \times 4 =$ |
| 3. $1 \times 11 =$ | 7. $9 \times 2 =$ | 11. $8 \times 6 =$ | 15. $6 \times 11 =$ | 19. $12 \times 5 =$ | 23. $3 \times 10 =$ |
| 4. $2 \times 11 =$ | 8. $5 \times 2 =$ | 12. $7 \times 6 =$ | 16. $7 \times 11 =$ | 20. $8 \times 5 =$ | 24. $6 \times 6 =$ |

Step 2: Let's practice some skills from a previous topic.

Topic 2:Decimals

1A. What is the place value of the 5 in 8.5296?	1B. Round 0.029 to 1 decimal place (1 dp.)	1C. Insert $<$, $=$ or $>$ between the decimals. 0.37 0.216
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2A. $93900 \div 10 =$

2B. $0.42 \times 10 =$

2C. $4 \div 10^2 =$

3A. $1158 + 426$

3B. $5.75 - 1.9$

3C. Evaluate $207 + -267$

4A. 5×859

4B. 3.6×0.06

4C. Evaluate 0.567×4.3

5A. a. $70 \div 7 =$

5B. $7677 \div 9$

5CI. $1.83 \div 0.3$

5CII. Solve
 $8x - 6 = 70.08$

b. $25 \div 5 =$

c. $87 \div 12 =$ rem.

6A. Convert 97% to a decimal.

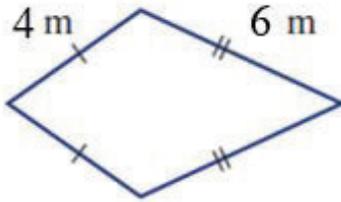
6B. Calculate 8% of 19

6C. Calculate 58.3% of 25

Step 3: The Core Level Skills will be the main focus of Topic 3.

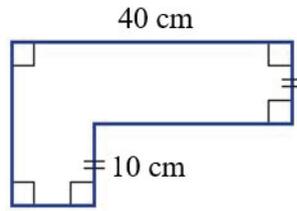
Complete what you can each week with your best effort and watch your skills grow over time.

1A.  Calculate the perimeter of the shape below.



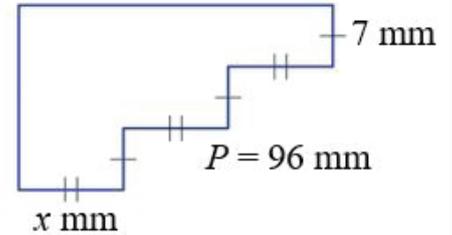
$P =$

1B.  Calculate the perimeter of the shape below.

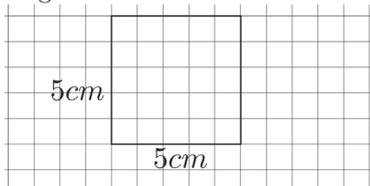


$P =$

1C.  Find the value of x by creating and solving an appropriate equation.

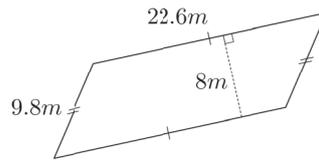


2A.  Calculate the area of the rectangle below.



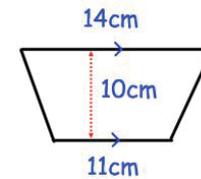
$A =$

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



$A =$

2C.  Calculate the area of the shape below by first expressing the area in a single calculation and then evaluating using line by line working.



$A =$

Step 4: Complete these worded questions of increasing difficulty. You may use a calculator at any time.

1.  In three Year 7 classes, 27 students, 22 students and 26 students attended roll call one morning. How many Year 7 students were present?

2.  Cynan travelled 245 kilometres in 3.5 hours. What was his average speed in kilometres per hour?
A. 24
B. 50
C. 70
D. 857.50

3.  If p and q are positive integers (whole numbers), and $p + q < 10$, how many different values can the product pq take?