

Year 5 Term 3 Homework

Student Name: _____	Grade: _____
Date: _____	Score: _____

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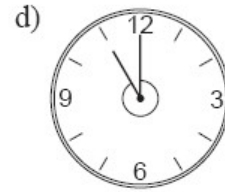
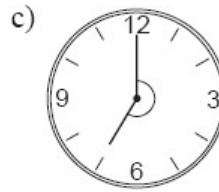
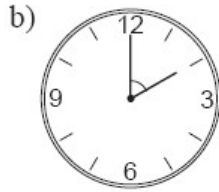
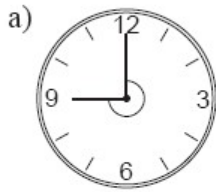
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4 Year 5 Term 3 Week 4 Homework

4.1 Topic 1 — Time

1. Write down the angle formed by the arms of the clock in right angles:



.....

2. Fill in the missing numbers in the boxes:

a) 3 minutes = $\frac{3}{\square}$ hour = $\frac{\square}{\square}$ hour = $\frac{\square}{100}$ hour = $0.\square$ hour

b) 15 minutes = $\frac{15}{\square}$ hour = $\frac{\square}{\square}$ hour = $\frac{\square}{100}$ hour = $0.\square$ hour

c) 63 minutes = $\frac{63}{\square}$ hour = $\frac{\square}{\square}$ hour = $\frac{\square}{100}$ hour = \square hours

d) 6 hours = $\frac{\square}{24}$ day = $\frac{1}{\square}$ day = $0.\square$ day

e) 3 hours = $\frac{3}{\square}$ day = $\frac{1}{\square}$ day = $0.\square$ day

f) 15 hours = $\frac{\square}{24}$ day = $\frac{\square}{8}$ day = $0.\square$ day

3. What would be the time 5 hours 25 minutes after 5:30 p.m.?

.....

4. How many hours are there in all of December and January?

.....

4.2 Topic 2 — Space 3D

1. Imagine the cuboid shown by each net. Find its surface area and volume.

①

②

③

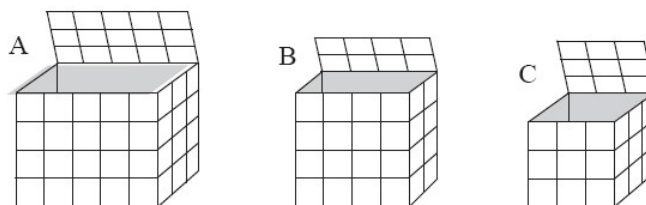
Scale
Grid unit: 1 cm

$A =$ _____
 $V =$ _____

$A =$ _____
 $V =$ _____

$A =$ _____
 $V =$ _____

2. There are three different boxes for storing unit cubes:



- a) How many cubes will fit along the front edge of the bottom layer in each box?
- b) How many: i) rows ii) cubes can be put in each bottom layer?
- c) Fill in the table.

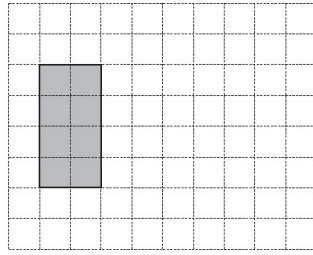
	Along an edge	In a layer	Total number of cubes
A			
B			
C			

3. How many faces, edges and vertices has each of these shapes:

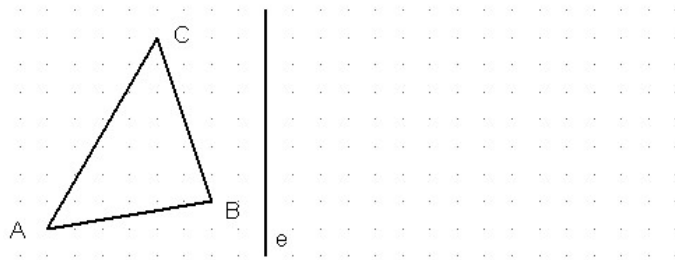
- (a) cuboid: $F =$ _____ , $E =$ _____ and $V =$ _____
- (b) square-based prism: $F =$ _____ , $E =$ _____ and $V =$ _____
- (c) triangular-based prism: $F =$ _____ , $E =$ _____ and $V =$ _____

4.3 Topic 3 — Space 2D

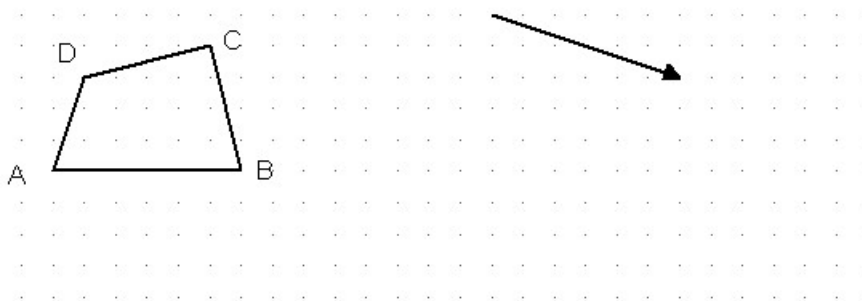
1. On the grid, draw a triangle which has the same area as the shaded rectangle.



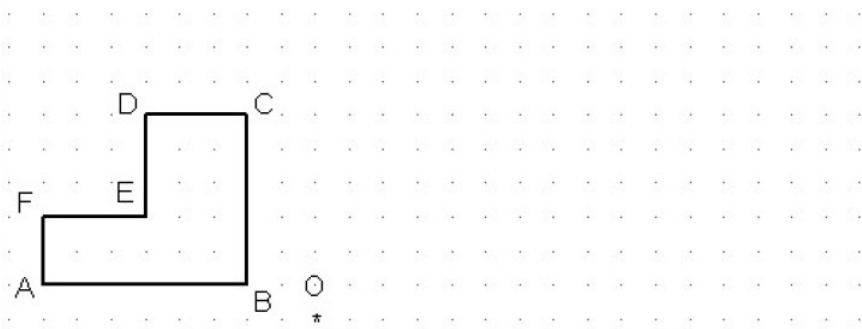
2. Reflect the shape in the given mirror line.



3. Translate quadrilateral ABCD in the direction, and by the distance, shown by the arrow.



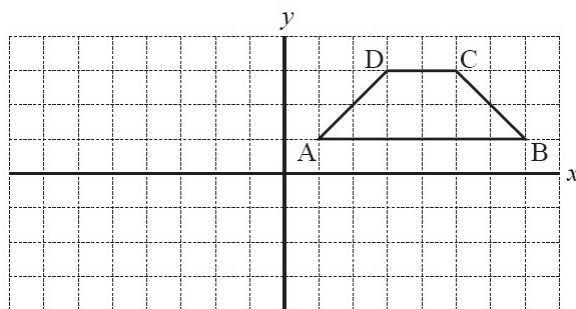
4. Rotate the shape around centre o by 90° clockwise.



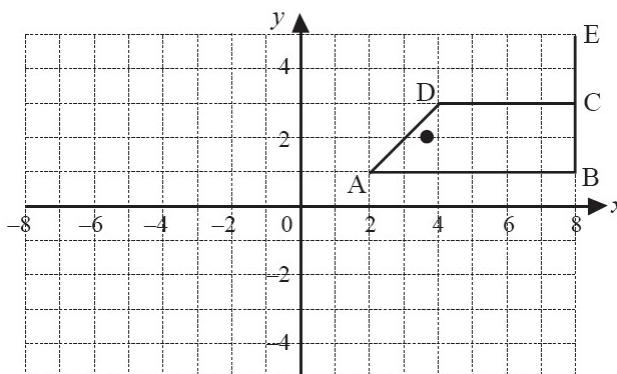
4.4 Topic 4 — Position (The Number Plane)

- When two numbers are used to locate the position of a point, it is called the number plane.
- A number plane is divided by two lines called the X-axis and Y-axis.
- The point where they cross each other is called the origin (0,0).
- Any point in a number plane is represented by an ordered pair (x, y).

1. Reflect quadrilateral ABCD in the x-axis, then reflect its image in the y-axis.



2. For the given number plane complete the following:



- (a) Label the mouse in the form of ordered pairs:
 A (2, 1) B (,) C (,) D (,) E (,)
- (b) Reflect the mouse in the y-axis. Label the image of point A with A', ect.
 A' (,) B' (,) C' (,) D' (,) E' (,)
- (c) Reflect the mouse in the x-axis. Label the image of point A with A*, ect.
 A* (,) B* (,) C* (,) D* (,) E* (,)
- (d) Reflect the image in (b) in the x-axis. Label the image of point A' with A'', ect.
 A'' (,) B'' (,) C'' (,) D'' (,) E'' (,)

4.5 Problem Solving (Clock Problems)

Exercise 4.5.1

1. A certain clock gains one minute of time every hour. If the clock shows the correct time now, in how many hours will it show the correct time again without regard to a.m. or p.m.?

2. At which hours do the hands of a clock form an angle that measures 60° ?

3. A certain clock loses five minutes every hour. One day this clock is set to the correct time at 10:10 a.m. What will be the correct time when the clock first shows 12:00 on the same day?

4. A fast clock gains one minute per hour and a slow clock loses two minutes per hour. At a certain time, both clocks are set to the correct time. Less than 24 hours later, the fast clock registers 9 o'clock while the slow clock register 8 o'clock. What is the correct time at that moment?

4.6 Quiz 4

4.6.1 Part A — 10 Multiple Choice Questions (1 mark each)

- 0.85 of a kg in g is:
(A) 85 (B) 850 (C) 8500 (D) 8.5
- $\frac{0.3 \times 0.06}{0.4} =$
(A) 0.045 (B) 0.45 (C) 4.5 (D) 45
- If 30% of a number is 48, then 40% of the number is :
(A) 32 (B) 64 (C) 18 (D) 36
- The masses of 2 objects are 5.4 kg and 0.0146 tonnes. What is the sum of their mass in kg?
(A) 2 kg (B) 20 kg (C) 200 kg (D) 68.6 kg
- When 139 is divided by a certain number, the quotient is 23 and the remainder is 1. The number must have been:
(A) 4 (B) 5 (C) 6 (D) 7
- 75% of 1.2 km is :
(A) 840 m (B) 900 m (C) 90 m (D) 300 m
- What percentage is 8 mL of 1 L?
(A) 8% (B) 0.8% (C) 80% (D) 0.08%
- Adam and Bob together have \$320. Adam has one third of Bob's share. How much does Adam have?
(A) \$80 (B) \$120 (C) \$160 (D) \$240
- A rectangle has perimeter 48 cm. The length is twice the breadth. What is the area of the rectangle?
(A) 32 cm^2 (B) 48 cm^2 (C) 96 cm^2 (D) 128 cm^2
- Which of the following is the largest?
(A) 30% of 14 (B) 60% of 7 (C) 80% of 5 (D) 50% of 9

4.6.2 Part B — 10 Average Questions (2 marks each)

1. A farmer gathered the apples from his orchard and packed them in boxes. In a full box, there were 6 rows of 10 apples in two layers. How many apples could he pack in 50 such boxes?

2. What number would most likely complete the pattern: 5, 10, 17, 26, 37, ?

3. Find the 35 seconds as a fraction of two minutes.

4. A satellite takes 27.25 hours to orbit the Earth. How many complete orbits does the satellite make in two weeks?

5. Richard has 3 shirts, 4 belts and 5 ties. How many different groups of a shirt, belt and tie can he wear?

6. Find the area of a rectangle with sides $\frac{1}{4}$ m by 0.48 m.

7. Decrease the product of 12 and 7 by the square of 6.

8. How long will it take to fly 2535 km on a plane if it travels 780 km per hour?

9. There are 6 people in my family. We each gave the other a present. How many presents were there?

10. A car is going at 85 km/h. How long will it take to cover a distance of 306 km?

4.6.3 Part C — 10 Extension Questions (3 marks each)

1. A tradesman bought 8 machines of the same type for \$4400 in total. Later, he sold them for \$5184. How much profit did he make on each machine?

2. In winter, when it is noon in Sydney. It is 11:30 a.m. in Adelaide and 10 a.m. in Perth. What time is it in:

(a) Adelaide when it is 3:40 p.m. in Sydney: _____

(b) Sydney when it is 4:45 p.m. in Perth: _____

(c) Adelaide when it is 11:52 p.m. in Perth: _____

3. A rectangle has an area of 84 m^2 . Find the length if the breadth is 8 m less than the length.

4. How long will it take to run 1000 m if you can run at $6\frac{2}{3}$ m in 1 second?

5. 1, 2, 3 and 4 are four cards. If the cards are separated into twos, making 2 digit numbers, how many possible ways there of making 2 digit numbers?

6. I walked for two and a half hours at 4 km/h and 4 hours at 2.5 km/h. What was the average speed for the entire journey?

7. A car travel one kilometre in 1 minute 12 seconds. How many kilometres will the car travel in one hour at this rate?

8. A paper boat put on a flowing river reached a point 4.5 km away in half an hour. Find the rate at which the river was flowing in metres per second.

9. Peter drives for 15 minutes on a highway. He covers a distance of $31\frac{1}{4}$ km. If the speed limit on the highway is 110 km/h, by how much does Peter exceed the limit?

10. After driving at 76 km/h for two and a half hours, Joe was 35 km from his destination. What is the total distance he needs to travel?

4.6.4 Part D — 8 Challenging Questions (5 marks each)

1. In a race, two cars leave the starting line at the same time. One car takes 240 seconds to complete one lap and the other takes 288 seconds. how long after they start will it take for them to meet again at the starting line?

2. A freight train is 160 metres long and travels at a speed of 32 km/h. How long will it take the complete train to pass through a station of length 80 m?

3. A certain sum of money is divided between three boys so that for each \$5 the first boy receives, the second boy gets \$6 and the third boy gets \$7. If the boy who gets the largest share receives \$84, how much does the first boy receive?

4. We average 60 km per hour for a 5 hour journey. How much faster in kilometres per hour, would we have to travel if we wanted to save 1 hour in travelling time?

5. Suppose that a clock shows the correct time now. When will it show the correct time again if it gains two minutes every hour?

6. Suppose that a clock shows the correct time now. When will it show the correct time again if it loses three minutes every hour?

7. A dog takes 3 steps to walk the same distance for which a cat takes 4 steps. Suppose 1 step of the dog covers 35 cm. How many centimetres would the cat cover in taking 12 steps?

8. Find the smallest of the five consecutive numbers whose sum is 200.
