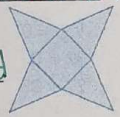
# Week 6 Mental Maths Resources

If you get stuck on your mental maths sheet this week, come to this resource and see if it will help you!

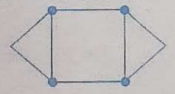
Please note, it only helps you if you actually look at it…

## MONDAY

1. Time? _____
2. 999 993 + 8 = 1,000,001
3. Can a triangular pyramid tessellate? Y or N Y
4. If the central standard time (CST) is 11 a.m., what time is it in Victoria? 11:30am
5. 20 x 3 = 60
6. 4 x 8 = 32
7. 20 – 13 = 7
8. What is the ratio of boys to girls if these are 18 girls and 6 boys? 18:6 or 6:1
9. This has a net of square-based pyramid



10. In a class test the boys' top three marks were 80%, 70%, 60%. What is the mean score? 70%
11. (5 + c) = 3 x 5 c = 10
12. (Roman Numeral) MCM = 1900
13. Can this network be traversed? No



14. 0.4 = $^{4}/_{10}$
15. 50 ÷ 0.5 = 100
16. Change $^{17}/_{5}$ to a mixed number. $3\frac{2}{5}$.
17.  Lots of possible answers

    Change one block to make a different pentomino.
18. If it is 35°C, is it hot or cold? hot
19. How many 20c coins make up $20.00? 100
20. A farm is 400 m by 500 m, it equals 200,000 $m^2$

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## MONDAY

1. Time? _____
2. •3 + .7 = 10
3. $5.00 + $4.00 = $9.00
4. 40 ÷ 10 = 4
5. ☑ Clockwise or ☐ anticlockwise?

6. $3^2 = 3 \times 3 =$ 9
7. Round 94 to the nearest ten = 90
8. Days in a leap year? 366
9. Weeks in a year? 52
10. 7 x 4 = 28
11. Share $15.00 among 3 children. $5.00 each
12. 60, 55, 50, 45, 40
13. Would you buy flour by the kilogram (kg) or the kilometre (km)? Kg
14. Double 14 = 28
15. Days in August? 31
16. 17 – 9 = 8
17. 12 – 6 = 6
18. Pentagon = 5 sides
19. 

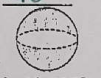
    Name this 3-D shape. cone
20. Days in May? 31

## MONDAY

1. Time? _____
2. 4 m = 4000 mm
3. What is the perimeter of a rectangular building 30 m by 15 m? 30+15+30+15=90m


4. $20.00 – $9.20 = $10.80
5. Write the numeral ten thousand. 10,000
6. 1 – 0.3 = 0.7
7. Round 1.7 to the nearest whole number = 2
8. 5)345 = 69
9. Draw a $^{1}/_{2}$ turn.

10. 0.3 + 0.7 = 1.0
11. $9^2 = 9 \times 9 = 81$
12. How many hours in 2 days? 48
13. What is this 3-D shape? sphere



14. What is the place value of 1 in 12 400? tens of thousands
15. Double 0.4 = 0.8
16. Is the Sydney Harbour Bridge symmetrical? Yes
17. Measure the length of this right angle •5cm 1.5cm = 2 cm
18. How much would you pay for 2 kg of baby powder at 75c per kg? 2 x 75c = 150c = $1.50
19. Using the digits 7, 0, 1, what is the smallest number you can arrange? 107
20. 0, $^{1}/_{2}$, 1, 1 $^{1}/_{2}$, 2

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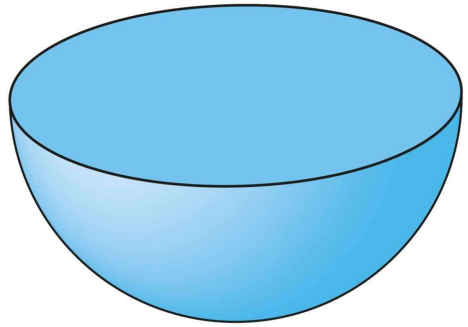
# 3D Shapes

Hemisphere

# Square Numbers

A square number is the product (answer) when a number is multiplied by itself.

For example:

9 is a square number, because it is the product of 3x3.

16 is a square number, because it is the answer to $4^2$, which we say as ‘four squared’.

# Prime & Composite Numbers

A prime number is a number greater than 1 that is not a product of any other two numbers.

Another definition is that it is a number that can only be made by multiplying by itself and 1.

For example:

7 is a prime number. The only way you can make 7 using multiplication is by multiplying the number 7 by 1.

6 is not a prime number, because you can make 6 by multiplying 2 and 3. Numbers that are not prime numbers are called composite numbers.

Here is a video explaining Prime and Composite numbers:
https://www.youtube.com/watch?v=TXDyU5f5WR8

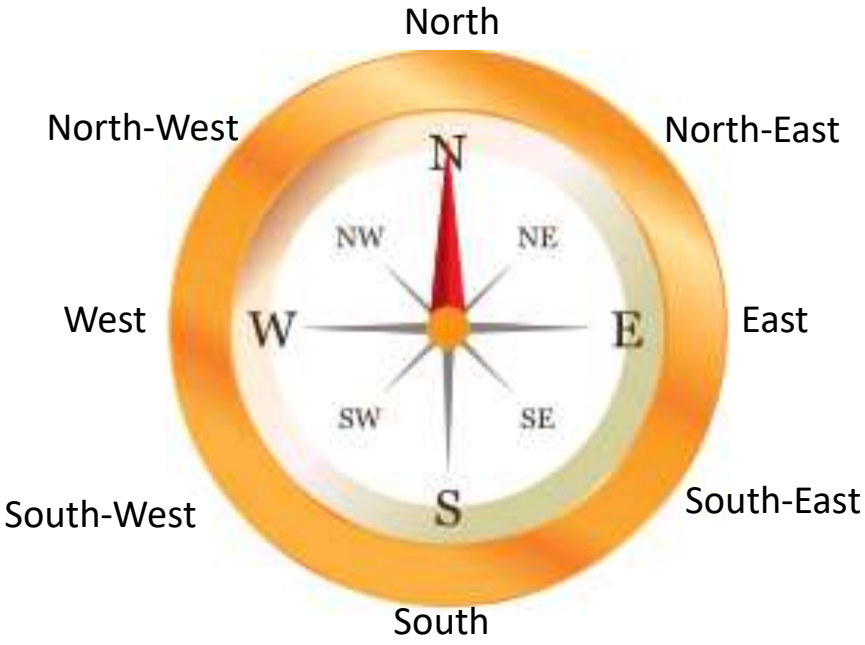
# Division

Click on this link to see a video of Mrs Schwind working through two examples from last week's Mental Maths sheets.

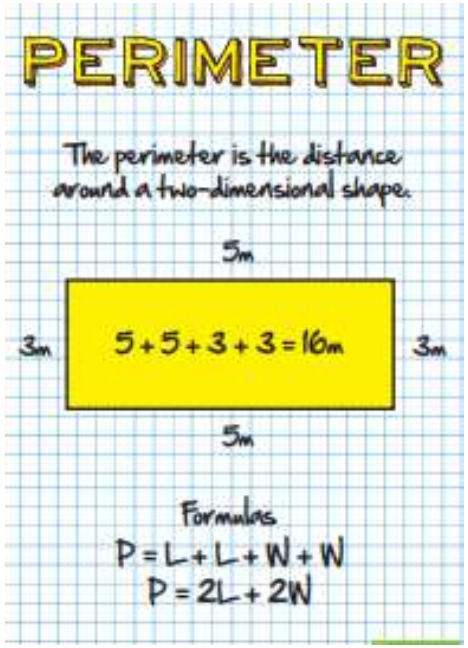
The link is also posted as a comment below the slide in case you are having difficulty accessing it.

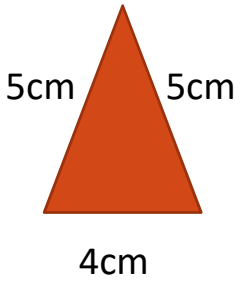
https://www.youtube.com/watch?v=puC43LwGv4w&feature=youtu.be

# Compass Directions



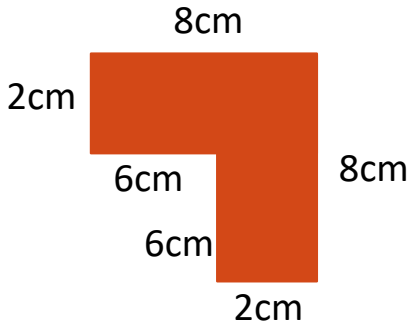
# Perimeter




The perimeter of this shape can be calculated by adding up all the lengths of the sides.

5cm+5cm+4cm = 14cm.

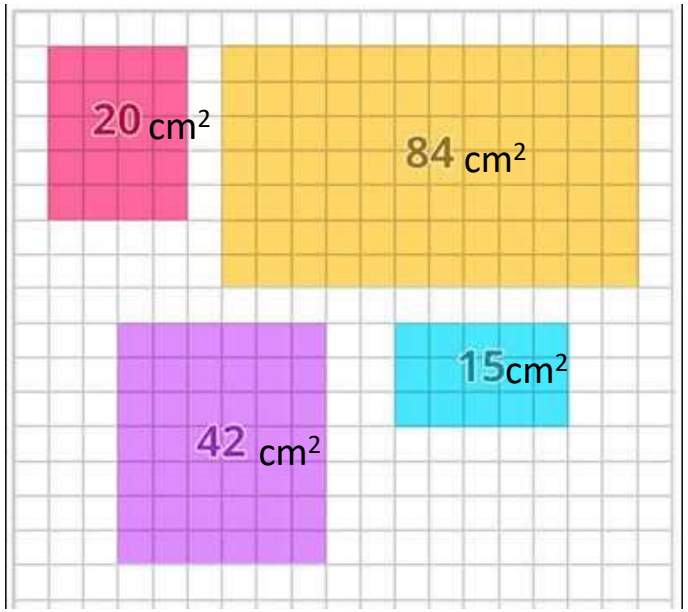



The perimeter of this shape can be calculated by adding up all the lengths of the sides.

8cm+8cm+2cm+6cm+6cm+2cm=32cm

*These shapes are not to scale.

# Area

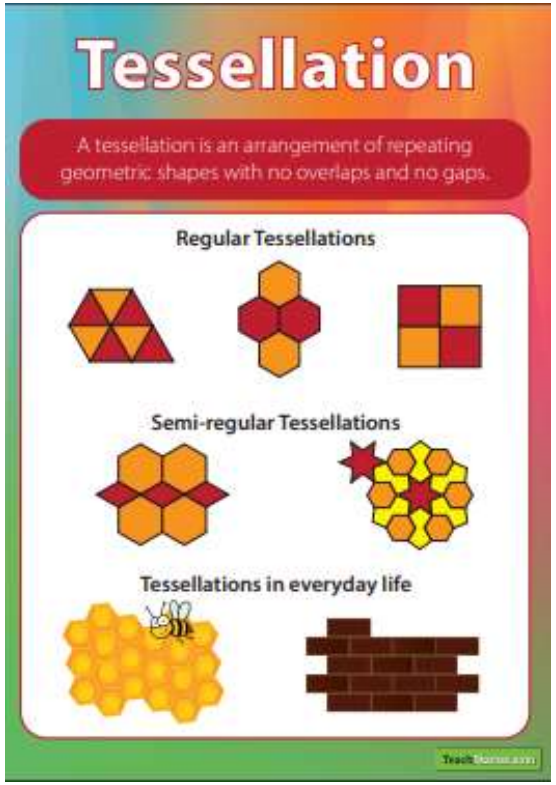



Area of a square or rectangle is calculated by multiplying the length by the width.

When we look at the area of the shapes to the right, we can see that these shapes are made up of 1cm squares. So for example, the pink shape is made up of 20 1cm square squares.

This is why when we write the area of a shape, we must write it as $20cm^2$ – because we are talking about square centimetres, not just the measurement of a line.

# Tessellate




A tessellation is an arrangement of repeating geometric shapes with no overlaps and no gaps.

# Central Standard Time/Eastern Standard Time

## Australian Central Standard Time

Australian Central Standard Time (ACST) is 9:30 hours ahead of Coordinated Universal Time (UTC).

This time zone is in use during standard time in Australia. Australian Central Standard Time is a half-hour time zone.

Australian Central Standard Time (ACST) is used in South Australia and Northern Territory.

The Northern Territory State does not use Daylight Saving Time (DST).

Victoria is half an hour ahead of ACST.

There are online converters you can find on the internet to convert between different time zones.

## Australian Eastern Standard Time

Australian Eastern Standard Time (AEST) is 10 hours ahead of Coordinated Universal Time (UTC). This time zone is in use during standard time in: Australia.

This time zone is often called Eastern Standard Time.

Australian states/territories using AEST in the winter and AEDT in the summer:

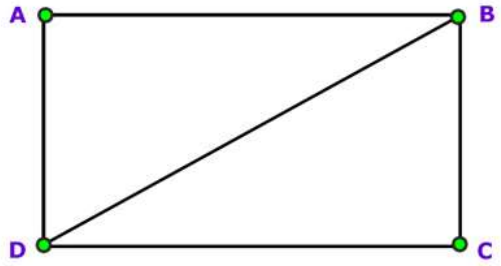
- Australian Capital Territory
- New South Wales - except Broken Hill (Yancowinna County) (ACST/ACDT)
- Tasmania
- Victoria

Australian states/territories using AEST all year:

- Queensland

# Traversing Networks

A “Traversable **Network**” is one where we can find a route through the **network**, along the edges, that uses all of the edges only once. A **network** is said to be traversable when it is possible to start at a “Vertex” (or “Node”), and trace out the whole **network** without having to retrace over any of the connector “Edges”.




## Simple Traversable Network

We can traverse the simple Network at the bottom left (with no back-tracking or doubling up) by going from A to B to C to D to B (or by any similar routes).

We travel along all of the Network “Edges” (or Connectors) only once, which means this is a “Traversable Network”.

Note that when we trace fully around a Network, we do not have to get back to our starting point.

As long as we move along all connector “Edges” with no repeats, we have “Traversed” the Network. We can then say that the Network is “Traversable”.

# Hectares

The hectare is a metric unit of area equal to a square with 100-metre sides, or 10,000 m², and is primarily used in the measurement of land.

There are 100 hectares in one square kilometre. An acre is about 0.405 hectare and one hectare contains about 2.47 acres.