5th class Maths remote learning

27th April-8th May 2020

Welcome back everyone!

We hope you are all well and that you enjoyed your Easter break! We have lots of fun activities for you to get stuck into this term.

Remember! These power points include a ‘menu’ of activities. We do not expect you to complete every task. Please just try your best and choose topics and activities that interest you most.

Contact your teachers

- Parents can contact their son's teacher via email

  5thClassTeacher@hollyparkbns.ie

- Please don't hesitate to contact us if you or your son have any queries. We are happy to answer questions and give feedback on your child's work.

- Please include the teacher's name in the subject line of your email.

Topics this fortnight

Week 1: 3-d Shapes

Week 2: Directed numbers

Book work:

Week 1

Planet Maths Ch 26 3D shapes p 162-166

Book: https://www.folensonline.ie/home/library/programmes/planet-maths5/ebook/

Anwsers: https://content.folensonline.ie/programmes/PlanetMaths/PM5/resources/teachers/7961_PM2012TRB_5th_Photocopiable_Answers.pdf

Figure It out: Ch 16 p 53/54

Answers here: https://my.cjfallon.ie/ebooks/FIO_5.pdf

Master you Maths: Continue on with the next two chapters – one per week.

Answers here: https://my.cjfallon.ie/ebooks/23401.pdf

Week 2 :

Ch 21: Directed Numbers p133-137

Ch 24 p79/80 Ex. A

For tables and general revision games and activities go to:

www.topmarks.co.uk

To start with try

www.topmarks.co.uk/maths-games/hit-the-button **for tables**

www.topmarks.co.uk/maths-games/7-11-years/problem-solving **for problem solving**

3D Shapes

Lets refresh our memories!

Name the object and the 3D shapes!

a) 

b) 

c) 

d) 

e) 

f) 

g) 

h) 

i) 

j) 

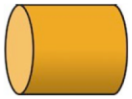
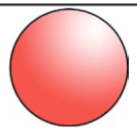
k) 

l) 

m) 

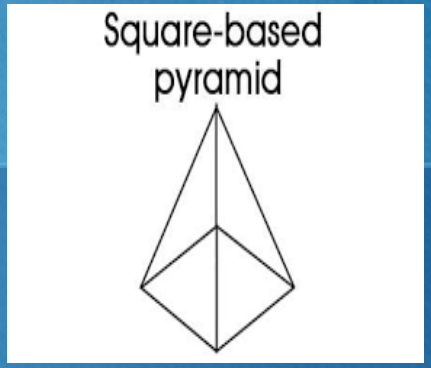
3D Shape Properties Table

Look carefully at the properties of these 3D shapes. Write your results in the table.

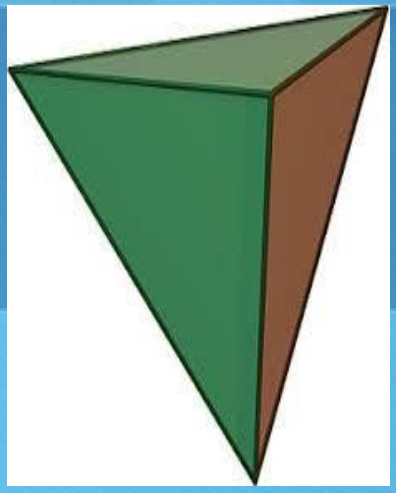
3D Shape	Number of Straight Edges	Number of Curved Edges	Number of Vertices	Does it roll?	Does it Stack?	Number of faces?
 Cube						
 Cylinder						
 Sphere						
 Cuboid						
 Cone						
 Square-Based Pyramid						

What do your results tell you about the shapes?

Pyramids

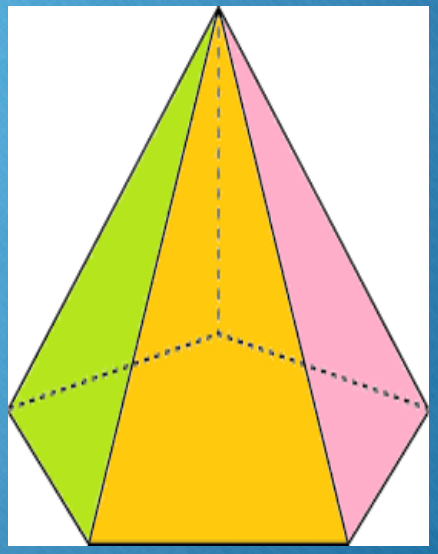


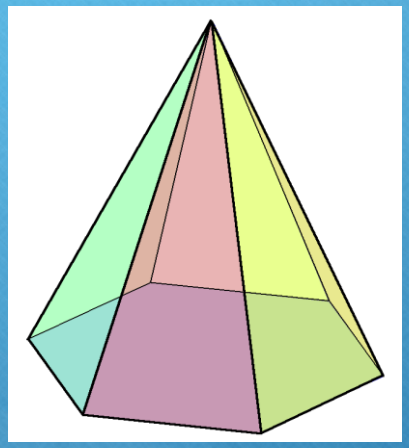
- We already know about square-based pyramids- they have a square base and 4 triangular sides.
- A **tetrahedron** is a pyramid with a triangular base and 3 triangular sides.
- A **pentagonal pyramid** has 5 triangular sides and a pentagon for a base
- A **hexagonal pyramid** has 6 triangular sides and a hexagon for a base, an so on.
- All of the triangular sides are equilateral triangles.



tetrahedron

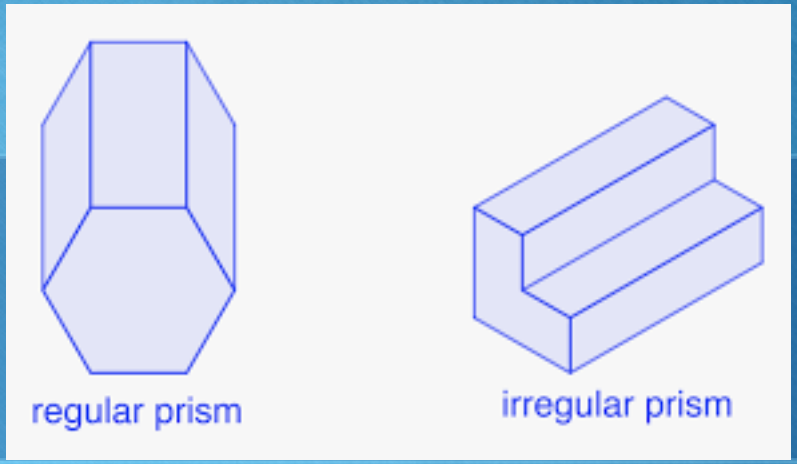
Pentagonal pyramid



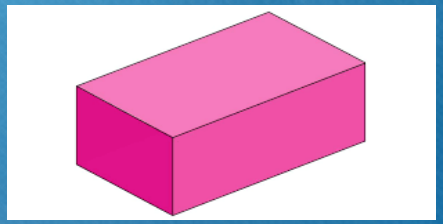


Hexagonal pyramid

Prisms



- A prism has identical ends (or bases), flat faces and the same cross-section (shape) across all its body.
- A prism gets its name from its base.
- **Regular prisms** have regular shaped bases while **irregular prisms** have irregular bases.



Activity: Use lollipop sticks, toothpicks or matchsticks to makes some 3D shapes. If you have some playdough or blu tac, you can use it to stick your corners together.

Watch the link below to help you;

https://www.youtube.com/watch?v=C8pNcIRN5ug

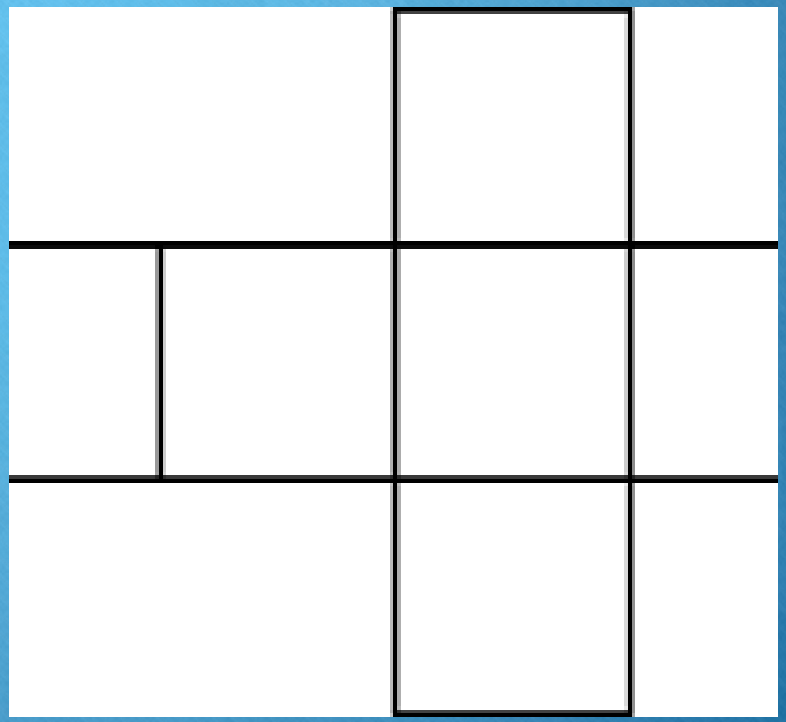
How many faces, edges and vertices can you see on each shape? Do your findings match your worksheet from the previous slide?

Nets

This is how a cube looks when you flatten it out.

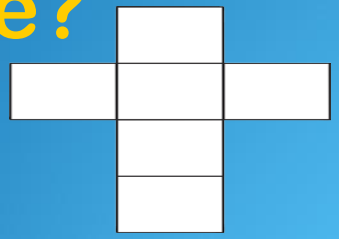
Its called the **net** of the cube.

You can see all the faces at the same time.

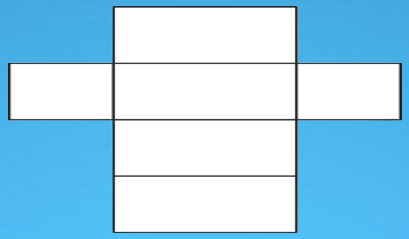


Can you match the correct net with the 3D shape?

1.



2.



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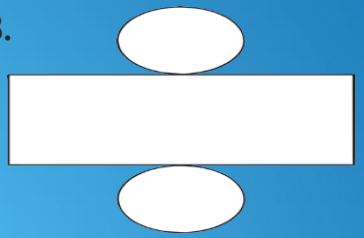

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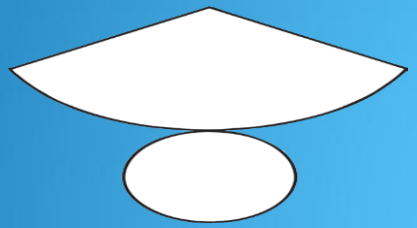

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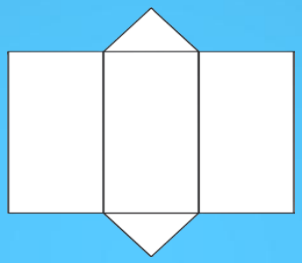
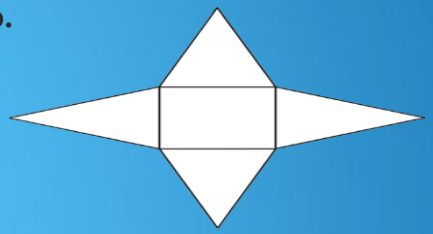
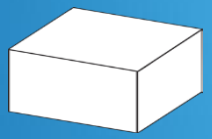


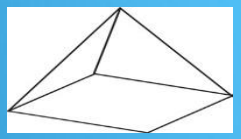
6.



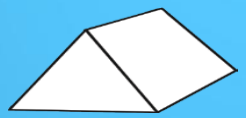
A



B

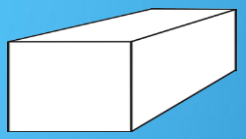


C



D

E



F

Draw the 3D shape and net

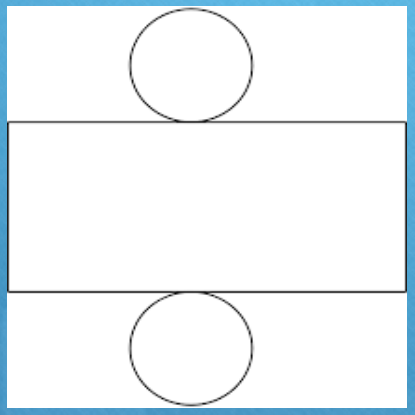
Activity

Read the clues. Name the 3D shape described, draw the shape and then draw its net

Example

Clue: I have a curved face. I have two circular flat faces, I have two edges.

Answer: cylinder



1. I have 6 square faces, 12 edges and 8 vertices
2. I have 1 flat face and 1 curved surface. My flat face is circular. My curved face makes a sharp point
3. I have 6 rectangular flat faces. I have 12 edges and 8 vertices.
4. I have 4 flat triangular faces. I have 6 edges and 4 vertices.
5. I have a flat square face. I have 4 triangular flat faces. I have 8 edges
6. I have 5 flat faces. 2 of them are triangles, 3 of them are rectangular.
7. I have 8 flat triangular faces. I have 12 edges and 8 vertices.
8. I have 7 flat faces. 2 of them are pentagons and 5 are rectangular.

Make your own 3D shapes from nets

- Copy and paste the link below into your browser for printable 3D shape nets from twinkl.

https://www.twinkl.ie/resource/nets-of-3d-shapes-t2-m-2379

- Cut out the nets and make your own 3D shapes

- Its best to use thin card as opposed to paper for this exercise.

Note for parents: go to www.twinkl.ie/offer and enter the code IRLTWINKLHELPS to set up a free account- there are lots of resources available for all subjects.

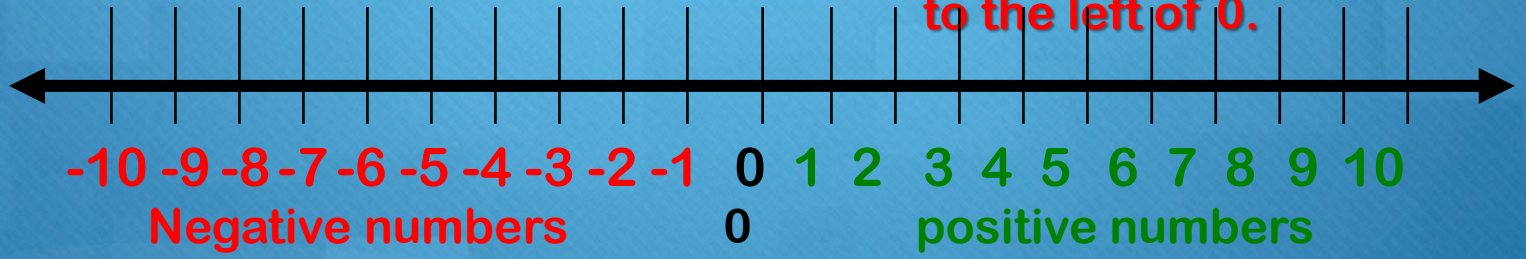
Directed numbers

Positive numbers

- Numbers that are bigger than zero are called positive numbers.
- They sometimes come with a plus sign (+7) and are called plus seven / positive seven. Or, as you are used to seeing them, they can stand on their own (7).

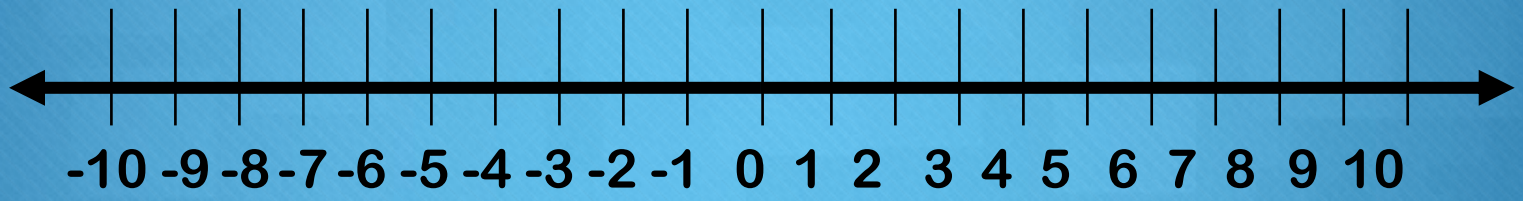
Negative numbers

- Did you know that there are numbers smaller than zero?
- They are called negative numbers.
- They come before 0 on the number line.
- For example -1, which is called minus 1 (or sometimes negative 1), is positioned just to the left of 0.



Positive and Negative Numbers

What's the difference?
Click on the question mark to find out



What is the difference between -2 and +4?

6

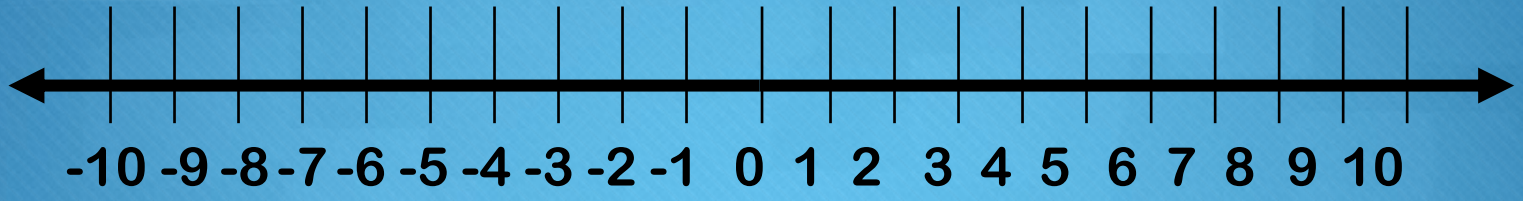
What is the difference between +5 and -1?

6

What is the difference between -6 and +3?

9

Positive and Negative Numbers



What is the difference between -3 and +2?

What is the difference between +7 and -2?

What is the difference between -4 and +1?

Team up with someone at home. Create your own questions and ask each other…

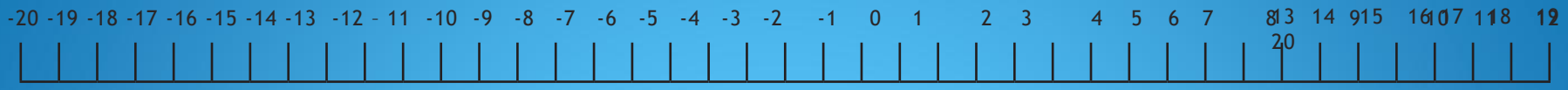
What is the difference between ___ and ___?

Can you think where you might see negative numbers? Hint words ! Bank , warm

Working with Directed Numbers

17

Use this number line to help you.



1. Start at 7. Take away 2. What number are you on now? 7 - 2 = _____
2. Start at -1. Add on 4. What number are you on now? -1 + 4 = _____
3. Start at 5. Take away 8. What number are you on now? 5 - 8 = _____

Now, solve the problems below in the same way.

a. 8 - 11 = _____

b. 2 - 9 = _____

c. -20 + 10 = _____

d. -2 - 5 = _____

e. 13 - 19 = _____

f. 0 - 8 = _____

g. 10 - 14 = _____

h. 8 - 9 = _____

i. 9 - 17 = _____

j. 11 - 13 = _____

k. -16 - 3 = _____

l. -5 - 4 = _____

m. -4 - 8 = _____

n. 14 - 10 = _____

o. -5 + 7 = _____

p. 16 - 15 = _____

q. -6 + 9 = _____

r. 17 - 20 = _____

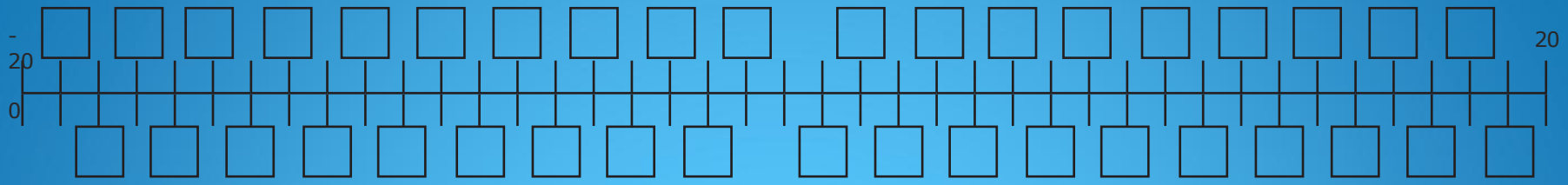
s. 12 - 18 = _____

t. -17 + 7 = _____

Working with Directed Numbers

18

Fill in the missing numbers on the number line.



Use the number line to solve each problem.

-16 -_____=-20

1 -_____=-12

_____ +9 =-3

_____ - 4 =-9

-11 + 12 =_____

_____ - 8 =0

-3 - 17 =_____

-8 -_____=-14

-5 -_____=-20

1 -_____=-9

_____ +6 =-11

-7 - 5 =_____

Put the numbers below in order starting with the biggest.

-6, -9, 3, -11, 0, 2, 8 =_____,_____,_____,_____,_____,_____, _____

5, -2, -5, 4, 10, -15, -1 =_____,_____,_____,_____,_____,_____, _____

1, -2, 8, -9, -8, 12, -13 =_____,_____,_____,_____,_____,_____, _____

Put the numbers below in order starting with the smallest.

13, 12, 9, -16, -17, -5, 3 =_____,_____,_____,_____,_____,_____,
_____

6, -2, 9, -10, -19, 18, 7 =_____,_____,_____,_____,_____,_____,
_____

7, -9, 2, -3, 0, 1, -4 =_____,_____,_____,_____,_____,_____, _____

Temperature and positive/negative numbers

The warmest temperature ever recorded at the South Pole was a freezing -12.3˚C in December 2011, making it one of the coldest places on Earth.

Complete the activities using negative numbers in a temperature context.

1. Put these temperatures in order, the coldest first.

   a. 2˚C, -8˚C, -1˚C,

   b. 6˚C, 10˚C, -15˚C, -11˚C, 14˚C, -6C, -4C

   c. 16˚C, 18˚C, -23˚C, -25˚C, -13˚C, 12˚C, 20˚C

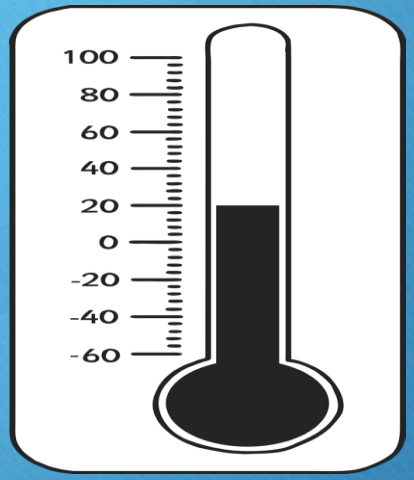
2. Which of these temperatures is lowest?

   a. -4˚C or -2˚C

   b. -8˚C or 8˚C

   c. -16˚C or -17˚C

   d. -5˚C or -6˚C



Negative Numbers and Temperature

3. Answer the questions below:

a. The temperature rises by 15 degrees from -4˚C. What is the new temperature?

_____

b. The temperature falls from 11˚C to -2˚C. How many degrees does the temperature fall?

_____

c. The temperature is 6˚C. It falls by 8 degrees. What is the temperature now?

_____

d. The temperature is -3˚C. How much must it rise to reach 5˚C?

_____

e. What is the difference in temperature between -4˚C and 14˚C?

_____

f. The temperature was -5˚C. It falls by 6 degrees. What is the temperature now?

_____

g. The temperature is -11˚C. It rises by 2 degrees. What is the temperature now?

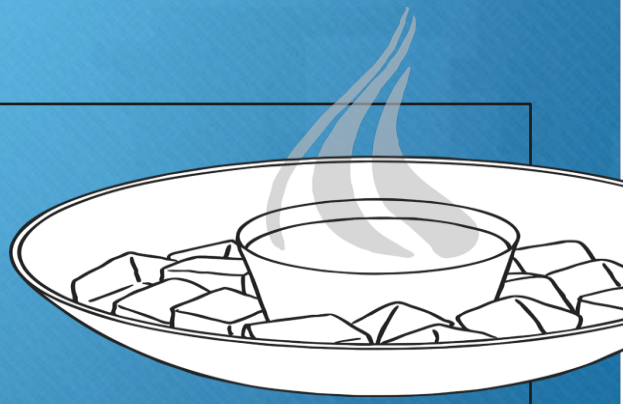
_____

h. The temperature is -20˚C. How much must it rise to reach -5˚C?

_____

You could also try to find out:

- which places, if any, are colder;
- how scientists based at the South Pole survive the cold;
- when, and for how long, the South Pole gets sunshine;
- where the hottest place on Earth is.



Bank accounts

Do you have a bank or credit union account?

Is your account in credit or debit?

Credit means you have money in your account.

It will show up on your account as a positive number e.g. +50e or 50e

Debit means you owe money to the bank. (e.g. – 50e)

When your account is in debit, we say it is **overdrawn**

Challenge!

a) Sarah had 387e in her bank account. Is her account in credit or debit?

b) At the end of the month she had to pay the electricity bill of 234e. What was the new **balance** in her account?

c) She also had to pay her phone bill (94e) and her Sky bill (67e). Now is she in credit or overdrawn? By how much?

Answer these! Get some help if you need it!

1. Sarah has a balance of -456e in her bank account. If she lodges 520e, what will the new balance in her account be?

2. Eoin bought match tickets for 105e but only had 72e in his account. By how much is his account overdrawn?

3. How many degrees are there between -25'C and 40'C?

4. At 7a.m., the temperature in Dublin was -4'C but by noon it had risen to 1'C. By how much had the temperature increased?

5. The temperature inside the house was 19'C. Outside, it was 24'C lower. What was the temperature outside?

6. Challenge! Look at the bank statement on the following slide. Are there any new words you are unfamiliar with? Ask someone to help you with the new vocabulary. Fill in the bank statement. You might need someone to help you at first. Just try your best!

Bank Statement

Fill in the missing information on this bank statement.

Account Details

Name: Miss J. Twinkl
Sort code: 85 – 92 – 00 **Date:** ____ **Account No:** 011 526 8192

DD = Direct Debit
CH = Charges
CQ = Cheque
CR = Credit
DC = Debit Card
ATM = Cash Withdrawal

Transactions

Date	Code	Details	Out (e)	In (e)	Balance (e)
		Balance brought forward	-	-	100.00
1 Jun	DD	Water Company	20.00	-	80.00
5 Jun	ATM	Cash withdrawal	10.00	-	
14 Jun	CQ	Cheque paid in	-	20.00	
15 Jun	DD	Broadband	25.00	-	65.00
17 Jun	ATM	Cash withdrawal		-	55.00
19 Jun	DD	Mobile phone	15.00	-	
23 Jun	DD	Savings		-	20.00
26 Jun	CR	Salary	-	300.00	
26 Jun	ATM	Cash withdrawal	30.00	-	290.00
26 Jun	DD	Gym	20.00	-	
26 Jun	CR	Refund from supermarket	-		300.00
26 Jun	DC	Petrol	20.00	-	
26 Jun	DC	Restaurant		-	250.00
30 Jun	ATM	Cash withdrawal	10.00	-	

Account Summary

Total paid in (e): _____ **Total paid out (e):** 210.00

Opening balance (e): 100.00 **Closing balance (e):** _____

Bank Statement Answers

Transactions					
Date	**Code**	**Details**	**Out (e)**	**In (e)**	**Balance (e)**
		Balance brought forward	-	-	100.00
1 Jun	DD	Water Company	20.00	-	80.00
5 Jun	ATM	Cash withdrawal	10.00	-	**70.00**
14 Jun	CQ	Cheque paid in	-	20.00	**90.00**
15 Jun	DD	Broadband	25.00	-	65.00
17 Jun	ATM	Cash withdrawal	**10.00**	-	55.00
19 Jun	DD	Mobile phone	15.00	-	**40.00**
23 Jun	DD	Savings	**20.00**	-	20.00
26 Jun	CR	Salary	-	300.00	**320.00**
26 Jun	ATM	Cash withdrawal	30.00	-	290.00
26 Jun	DD	Gym	20.00	-	**270.00**
26 Jun	CR	Refund from supermarket	-	**30.00**	300.00
26 Jun	DC	Petrol	20.00	-	**280.00**
26 Jun	DC	Restaurant	**30.00**	-	250.00
30 Jun	ATM	Cash withdrawal	10.00	-	**240.00**

Account Summary	
Total paid in (e): 350.00	**Total paid oue (e):** 210.00
Opening balance (e): 100.00	**Closing balance (e): 240.00**

3D Shapes Answers

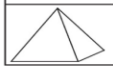
Page 5

a) Cuboids, prism
b) Cylinders, cuboids, prisms
c) cube
d) cylinder
e) cone
f) cuboid
g) cylinder
h) sphere
i) sphere
j) cylinder
k) cubes, cuboids, cylinder
l) cone
m) cylinder, prism

Page 6

3D Shape Properties Table Answers

Look carefully at the properties of these 3D shapes.
Write your results in the table.

3D Shape	Number of Straight Edges	Number of Curved Edges	Number of Vertices	Does it roll?	Does it Stack?
 Cube	12	0	8	No	Yes
 Cylinder	0	2	0	Yes	Yes
 Sphere	0	0	0	Yes	No
 Cuboid	12	0	8	No	Yes
 Cone	0	1	1	Yes	No
 Square-Based Pyramid	8	0	5	No	No

The results tell me that many 3D shapes have different properties. However, a cube and a cuboid have similarities because they both have the same number of vertices and edges. Also, a cylinder is the only 3D shape that can both stack and roll.

Page 11 answers

Net	Shape
1	a - cube
2	e- cuboid
3	d - cylinder
4	f - cone
5	c - triangular prism
6	b - square based pyramid

Page 12

1) Cube 2) cone 3) cuboid 4)triangle-based pyramid
5) Square based pyramid 6) triangular prism 7) octahedron 8)pentagonal prism

Directed Number Answers

Page 16: i) 5 ii)9 iii)5
In your bank account and to measure temperature. There are lots more but we will focus on these for now.

Page 17: 1. 5 2. 3 3.-3
a.-3 b.-7 c. -10 d. -7 e.-6 f.-8 g.-4 h.-1 i.-8 j.-2 k.-19 l-9 m.-12 n.4 o.2 p.1 q.3 r.-3 s.-6 t.-10

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Use the number line to solve each problem.

-16 -4= -20	**-11+12= 1**	**-5 -15= -20**
1- 13= -12	**8 -8= 0**	**1-10= -9**
-12 +9= -3	**-3 -17 = -20**	**-17+6= -11**
-5 -4= -9	**-8-6= -14**	**-7-5= -12**

Put the numbers below in order starting with the biggest.
8, 3, 2, 0, -6, -9, -11
10, 5, 4, -1, -2, -5, -15
12, 8, 1, -2, -8, -9, -13
Put the numbers below in order starting with the smallest.
-17, -16, -5, 3, 9, 12, 13
-19, -10, -2, 6, 7, 9, 18
-9, -4, -3, 0, 1, 2, 7

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1. **a. -8˚C, -6˚C, -4˚C ,-1˚C, 2˚C, b. -15˚C, -11˚C, 6˚C, 10˚C ,14˚C c. -25˚C, -23˚C, -13˚C, 12˚C, 16˚C, 18˚C ,20˚C**
2. a. **-4˚C b. -8˚C c. -17˚C d. -6˚C**
3. a. **11˚C** b. **13˚C** c. **-2˚C** d. **8˚C** e. **18˚C** **f. -11˚C** **g. -9˚C** h. **15˚C**

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a)Credit b)153e c)overdrawn by 12e. 1. 64e 2. 33e 3. 65'C 4. 5'C 5. -5'C