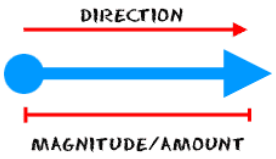
Grade 11

School-without-Walls Package 10 (31 May to 4 June 2021)

Homework_Day 1 (31 May 2021)

Subject	Click on the Youtube Links	Things to Note
English	Complete the sentence formation worksheet in the google form link provided. https://forms.gle/QbXchCcGoBw2MrdSA	Use Google to find the definition of the following words from your Readworks Comprehension "The Magic of Mime" and write them in your English notebook. - perform - imagination - audience - succeed - solution
Mathematics	Do Exercise 4C Q8, Q9 and Q10 and get ready for Zoom Session on 1 June.	
Physics	***Study the notes below on balanced and unbalanced forces. Write down what you think is important to you in your physics exercise book.*** Forces have a magnitude (strength) and a direction. Forces can be represented as arrows with the length of the arrow representing the magnitude of the force and the head of the arrow pointing in the direction of the force. Using such arrows, the resulting force (net force) and direction can be determined. Forces acting on an object can be balanced or unbalanced.  **Balanced forces** will cause no change in the speed of an object. • Balanced forces acting on an object in opposite directions and equal in strength, as shown in the arrows below, do not cause a change in the speed of a moving object. • Objects that are not moving will not start moving if acted on by balanced	

forces.

For example, in arm wrestling where there is no winner, the force exerted by each person is equal, but they are pushing in opposite directions. The resulting force (net force) is zero.

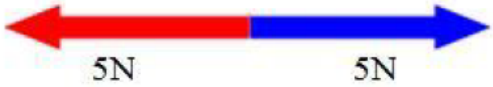
- Or, in a tug of war, if there is no movement in the rope, the two teams are exerting equal, but opposite forces that are balanced. Again, the resulting force (net force) is zero 

Image Source: 2005 Science Standards Support Document .

Unbalanced forces are not equal, and they always cause the motion of an object to change the speed and/or direction that it is moving.

- When two unbalanced forces are exerted in opposite directions, their combined force is equal to the difference between the two forces.
- The magnitude and direction of the net force affects the resulting motion
- This combined force is exerted in the direction of the larger force
- For example, if two students push on opposite sides of a box sitting on the floor, the student on the left pushes with less force (small arrow) on the box than the student on the right side of the box (long arrow).

- The resulting action (net force: smaller arrow to the right of the = shows that the box will change its motion in the direction of the

greater force as shown below:

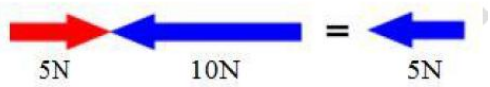


Image Source: 2005 Science Standards Support Document

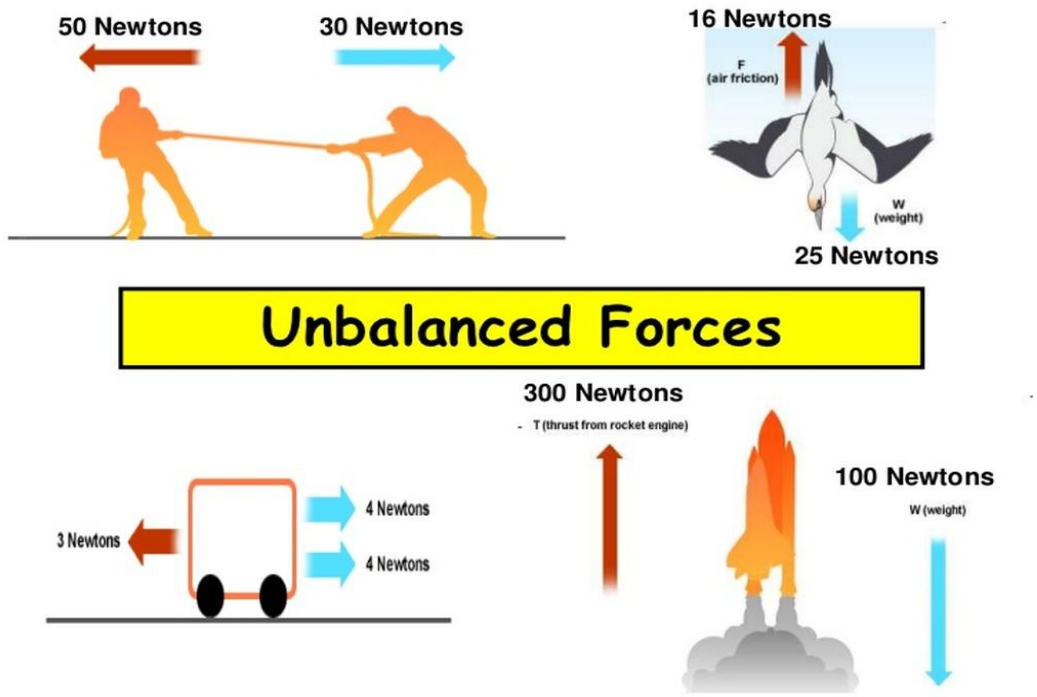
- Or, if in a tug of war, one team pulls harder than the other, the resulting action (net force) will be that the rope will change its motion in the direction of the force with the greater strength/magnitude as shown below:

Image Source: 2005 Science Standards Support Document

- If unbalanced forces are exerted in the same direction, the resulting force (net force) will be the sum of the forces in the direction the forces are applied.
    - For example, if two people pull on an object at the same time in the same direction, the applied force on the object will be the result of their combined forces (net force or longer arrow to the right of the =) as shown below:

Image Source: 2005 Science Standards Support Document

- When forces act in the same direction, their forces are added. When forces act in opposite directions, their forces are subtracted from each other.
- Unbalanced forces also cause a nonmoving object to change its motion
- If there is no net force acting on the object, the motion does not change. If there is a net force acting on an object, the speed of the object will change in the direction of the net force.

		
Portuguese	**Conteúdo:** VOZ ATIVA E VOZ PASSIVA **Objetivo:** Estudantes pode ser: Transformar voz ativa para voz passiva. - **Voz ativa e voz passiva** | Português On-line. https://youtu.be/3i5D1e9cu10 - Click on **Voz ativa e voz passiva** to read the worksheet. SWW Package 10 - Port= Voz Passiva de	Teste- Após assistir ao video, por favor clique (click) no link abaixo e responda as perguntas. Não se esqueça de enviar! https://forms.gle/KnB6zKXbTTkfRZd78

Homework_Day 2 (1 June 2021)

Subject	Click on the Youtube Links	Things to Note
English	**Zoom Class**	
Mathematics	**Zoom Lesson – (9am to 11am)** Answers to Exercise 4C Q1, Q2, Q3, Q4(a) and Q4(b), Q5(a) , and Q5(b).Copy the answers in your math exercise book if you do not know how to do or got it wrong. **Exercise 4C** **1.** Since the point (1, 2) passes through the line $y = -x + c$, $2 = -1 + c$ $c = 3$ **2.** Since the point (–2, 3) passes through the line $y = 4x + k$, $3 = 4(-2) + k$ $3 = -8 + k$ $c = 11$ **3.** **(a)** Gradient = 0 y-intercept = 1 Equation of line: $y = 1$ **(b)** Gradient = undefined No y-intercept Equation of line: $x = 1.5$ **(c)** Gradient = $\frac{-1-0}{0-1} = \frac{-1}{-1} = 1$ y-intercept = 1–1 Equation of line: $y = x - 1$ **(d)** Gradient = $\frac{1-0}{0-2} = \frac{1}{-2} = -\frac{1}{2}$ y-intercept = 1 Equation of line: $y = -\frac{1}{2}x + 1$ **4.** **(a)** $y = mx + c$ $0 = 3(0) + c$ $c = 0$ $\therefore y = 3x$	

	(b) $y = mx + c$ $7 = -\frac{1}{2}(5) + c$ $7 = -2\frac{1}{2} + c$ $c = 9\frac{1}{2}$ $\therefore y = -\frac{1}{2}x + 9\frac{1}{2}$ **5.** **(a)** Gradient of $AB = = \frac{-1-0}{1-0} = \frac{-1}{1} = -1$ y-intercept $= 0$ Equation of AB is $y = -x$ **(b)** Gradient of $CD = \frac{5-3}{2-1} = \frac{2}{1} = 2$ Equation of CD is in the form $y = 2x + c$ Since $(1, 3)$ lies on the line, $3 = 2(1) + c$ $3 = 2 + c$ $c = 1$ $\therefore$ Equation of CD is $y = 2x + 1$	
Physics	**Zoom Lesson (9am to 11am)** Read Physic Textbook 6.5 to 6.7 (pages 116 – 120) Study Example 6-1 and 6-2 and write the solutions in the physics exercise book.	With the help of the glossary (pages 710 to 728) Write down the definitions of the following words in your science exercise book: - balanced forces - Unbalanced forces

Portuguese	- Discurso direto e Discurso indireto (**Direct Speech & Reported Speech)** https://www.youtube.com/watch?v=wWJfJ0fjRbw	Teste - Após assistir ao video, por favor clique (click) no link abaixo e responda as perguntas. Não se esqueça de enviar! https://forms.gle/YwDa8MizD7FwbQgp8
Music	**Celebration (Kool and The Gang) | Playing For Change | Song Around The World** https://www.youtube.com/watch?v=8Lu41LulQos	Enjoy the Music.

Homework_Day 3 (2 June 2021)

Subject	Click on the Youtube Links	Things to Note
English	Watch the video on Dependent and Independent Clauses https://youtu.be/sAo6LbCUAQo	Complete Activity 5.1 in your Writing and Grammar book
Mathematics	Answers to Exercise 4C Q6 and Q7. Copy the answers in your math exercise book if you do not know how to do or got it wrong.	

6. **(i)** $AB = 2$ units

Length of perpendicular from C to $AB = 4$ units

$$\text{Area of } \triangle ABC = \frac{1}{2} \times \text{base} \times \text{height}$$
$$= \frac{1}{2} \times 2 \times 4$$
$$= 4 \text{ units}^2$$

(ii) Gradient of line passing through B and $C = \frac{5-3}{5-1} = \frac{2}{4} = \frac{1}{2}$

(iii) Gradient of line passing through A and $C = \frac{5-1}{5-1} = \frac{4}{4} = 1$

Equation of AC is in the form $y = x + c$

Since $(1, 1)$ lies on the line,

$$1 = (1)(1) + c$$
$$1 = 1 + c$$
$$c = 0$$

$\therefore$ Equation of AC is $y = x$

(iv) Let the length of the perpendicular from K to AB be h units.

Area of $\triangle ABK = 5 \text{ units}^2$

$$\frac{1}{2} \times \text{base} \times \text{height} = 5$$
$$\frac{1}{2} \times AB \times h = 5$$
$$\frac{1}{2} \times 2 \times h = 5$$
$$h = 5$$

Since the length of the perpendicular from K to AB is 5 units, the coordinates of K are either $(-4, 4)$ or $(6, 4)$.

Hence $k = -4$ or $k = 6$.

	7. **(i)** Given the gradient of line $= -\frac{2}{3}$, Equation of the line is in the form $y = -\frac{2}{3}x + c$ Since $(-3, 5)$ lies on the line, $5 = -3\left(-\frac{2}{3}\right) + c$ $5 = 2 + c$ $c = 3$ $\therefore$ Equation of the line is $y = -\frac{2}{3}x + 3$ **(ii)** Given that $(p, 3)$ passes through the line $y = -\frac{2}{3}x + 3$, $3 = -\frac{2}{3}p + 3$ $\frac{2}{3}p = 0$ $p = 0$	
Physics	***Watch*** ***Balanced and unbalanced forces sum*** ***https://youtu.be/L_TXu8ih668*** **Why don't we fall into the center of the earth?** https://youtu.be/QMpYOW8fpl8	
Portuguese	A nossa Lua: fases e eclipses https://www.youtube.com/watch?v=i7Zq545gMOo	Teste - Após assistir ao video, por favor clique (click) no link abaixo e responda as perguntas. Não se esqueça de enviar! https://forms.gle/cQFVG9gDcEVaGMDp7

Homework_Day 4 (3 June 2021)

Subject	Click on the Youtube Links	Things to Note
English	Readworks Comprehension - Go to www.readworks.org - Click "Student Login" - Enter Class Code "FY3J5S" - **Click on your name** - Enter Password "1234" Complete comprehension assignment	
Mathematics	Revise Chapter 3	Do Revision B1 Q1 to Q5
Physics	Read 6.8 Types of Forces (pages 120 – 121) Find out more about the four fundamental forces of nature https://www.youtube.com/watch?v=a-6skWBuHaE	Do 6B Section Review Questions 1 to 5 in Physic exercise book. With the help of the glossary (pages 710 to 728) Write down the definitions of the following words in your science exercise book: - Gravitational forces - Electromagnetic force - Strong nuclear interaction force - Weak nuclear interaction force
Portuguese	Frases simples ou frases complexas. https://www.youtube.com/watch?v=vsOM53BRPhY	Teste - Após assistir ao video, por favor clique (click) no link abaixo e responda as perguntas. Não se esqueça de enviar! https://forms.gle/RuUhwDmbjUqYHW3M6

Homework_Day 5 (4 June 2021)

Subject	Click on the Youtube Links	Things to Note
English	Word Attack 3A W4 https://forms.gle/Bgp4DZ8qX8ASHMX77	
Mathematics	Revise Chapter 4	Do Revision B1 Q6 to Q8
Physics	Read 6.9 Classification of forces Types of stress forces https://youtu.be/h1tPDTrk1_I?t=50 Friction force https://youtu.be/kUVZIRz7PKs	With the help of the glossary (pages 710 to 728) Write down the definitions of the following words in your science exercise book: - Field theory - Tensile force - Compressive force - Torsion - Friction - Shear force Do 6B Section Review Questions 6 and 7 in your exercise book.
Portuguese	- Frases condicionais (Conditional phrases) https://www.youtube.com/watch?v=S3ONu03RQKM	Teste - Após assistir ao video, por favor clique (click) no link abaixo e responda as perguntas. Não se esqueça de enviar! https://forms.gle/eqEZrgjo7kH4BQ787
Music	A Million Dreams (from The Greatest Showman) | Cover by One Voice Children's Choir https://www.youtube.com/watch?v=sr9QjaB83YA	A million dreams for the world you're gonna make. However big, however small, let the dreams of a better world keeps you going.