

**JUEVES, 11-06-20**

**¡Mis queridos chicos de 4º!**

**¡Qué pocas ocasiones me quedan para deciros esto...!**

**Creo que me voy a pasar el verano escribiendo una hoja en blanco cada día poniendo esto de “*mis queridos chicos...*” Así me haré a la idea de que seguís “conmigo” al otro lado de una pantalla (da lo mismo el tamaño o la forma...).**

**Pero, hasta que eso llegue, seguimos aquí “quemando cartuchos” (como se dice, vulgarmente). Ahora toca ir rematando ciertos aspectos importantes en un final de curso:**

**1.- No olvidéis ir terminando y entregando, en tiempo y forma, todas las TAREAS QUE TENGÁIS PENDIENTES de envío y que, cada profesor, os vaya reclamando. Ahora, ya no sirven los “olvidos ni despistes”. Lo próximo, será septiembre.**

**2.- Hoy jueves, día 11 de junio, tengo citados a vuestros padres para que vayan al cole a recoger el CERTIFICADO DE NOTAS DE 3º DE ESO, que os piden en muchos centros para hacer la inscripción para el próximo curso. Recordadles, por favor, que sean puntuales. Es por cita previa y tenemos que ser respetuosos con los horarios, por nosotros y por los demás.**

**3.- Recordad que la INSCRIPCIÓN EN LOS IES, para el próximo curso, empieza el próximo lunes día 15 y termina el viernes, día 19, ambos inclusive. ¡No se os vaya a olvidar hacerla!**

**UN ABRAZO**

**VUESTRA TUTORA**

# 4º ESO MATEMÁTICAS (Académicas) 11/06/2020

Dudas, o cualquier necesidad que tengáis , si os puedo ayudar porfa, me lo consultáis por

Teams (preferente) o correo [jose.casielles@fefcoll.org](mailto:jose.casielles@fefcoll.org).

## TEMA 5 :SEMEJANZA Y TRIGONOMETRÍA

### RAZONES TRIGONÓMETRICAS DE UN ÁNGULO CUALQUIERA

5. Sabiendo que  $\alpha$  es un ángulo del cuarto cuadrante que cumple que  $\cos \alpha = \frac{\sqrt{6}}{5}$  halla el seno y la cotangente de dicho ángulo.

6. Sabiendo que  $\alpha$  es un ángulo del tercer cuadrante que cumple que  $\operatorname{tg} \alpha = \sqrt{15}$  , halla la secante y la cosecante de dicho ángulo.

7. Resuelve las siguientes ecuaciones trigonométricas, dando todas las soluciones entre 0 y 360°:

a)  $\operatorname{sen} x = -\frac{1}{2}$

b)  $\operatorname{tg} x = -1$

8. Demuestra las siguientes igualdades trigonométricas.

a)  $\frac{\operatorname{sen}^4 \alpha - \cos^4 \alpha}{\operatorname{sen}^2 \alpha - \cos^2 \alpha} = 1$

b)  $\cos \alpha + \frac{\operatorname{sen}^2 \alpha}{\cos \alpha} = \sec \alpha$

**1 Match the words to their definitions. There are more words than you need. (5 points)**

- | A                   | B   |
|---------------------|---|
| 1. cloth            | ..... a. Shirts and dresses are made from it.                   |
| 2. wildlife         | ..... b. Rubbish is often put there.                            |
| 3. metal            | ..... c. Books are made from it.                                |
| 4. bottle           | ..... d. It holds liquids such as water, wine and fizzy drinks. |
| 5. natural resource | ..... e. It's made from the skin of animals.                    |
| 6. cardboard        | ..... f. We break it in order to prepare eggs.                  |
| 7. shell            | ..... g. We get this from sheep.                                |
| 8. landfill         | ..... h. an object that can hold something                      |
| 9. leather          | ..... i. Cars are made from it.                                 |
| 10. wool            | ..... j. It is used to make boxes.                              |
| 11. paper           |   |
| 12. container       |   |

**2 Complete the sentences with the words below. (5 points)**

*cut down ♦ disposable products ♦ tins ♦ cotton ♦ ends up ♦ natural resources  
renewable ♦ wood ♦ energy sources ♦ global warming*

1. We need to use ..... sources, like sunlight and wind.
2. Too much plastic waste ..... in the sea.
3. Air and wind are ..... that don't hurt the environment.
4. We had to ..... the tree next to our house after the storm had damaged it.
5. Is the furniture made of ..... ?
6. Many people use ..... because it makes life easier.
7. Experts say that ..... is the reason for extreme climate changes.
8. .... are collected from the Earth and aren't made by man.
9. I wear 100%-..... shirts in the summer.
10. Some people keep ..... of food for an emergency.

**3 Complete the sentences. (5 points)**

1. For years, the government d ... .. waste here.
2. The first thing our dog does with a bone is b ... .. it in the back garden.
3. Be careful! This symbol on the box means that there is g ... .. inside.
4. Throw the vegetable p ... .. away – it smells!
5. Children's toys are often made from p ... ..
6. The city closed the beach after the oil from the ship p ... .. the area.
7. Food and paper d ... .. quickly.
8. We've got enough honey. There are two j ... .. in the cupboard.
9. Would you like me to buy you a c ... .. of cola?
10. Can you please buy two c ... .. of milk on your way home?

#### 4 Complete the text with the words below. (5 points)

*kill ♦ proved ♦ struggle ♦ well-being ♦ reduce ♦ wildlife ♦ nightclub ♦ fat ♦ endangered ♦ avoid*

Everyone knows that ocean animals are <sup>1.</sup> ..... by pollution and waste. But there is another, less known, danger that is threatening ocean <sup>2.</sup> ..... – noise from ships. How can noise <sup>3.</sup> ..... animals in the water? Dolphins and whales use sound to communicate. Experts have now <sup>4.</sup> ..... that noise from the ships makes it difficult for ocean animals to hear. The average level of noise from a ship is similar to noise from a rock concert or <sup>5.</sup> ..... . Even if an animal isn't swimming near the ship, the sound that reaches it is still as loud as the sound from a vacuum cleaner. Just like you would <sup>6.</sup> ..... to have a conversation with that type of noise in the background, a whale has trouble finding food and communicating with the members of its group when there is a lot of noise. To <sup>7.</sup> ..... being separated from the group, whales must swim more closely together than usual, limiting their choice of food. When a whale doesn't get enough to eat, it uses the <sup>8.</sup> ..... supplies in its body. This is also dangerous, because this is where toxic chemicals from water pollution are stored. In order to look after the <sup>9.</sup> ..... of our ocean animals, we must <sup>10.</sup> ..... the level of noise in the ocean.

#### 1 Complete the sentences in reported speech. Use the correct form of the verbs below. (6 points)

*pick up ♦ lend ♦ plant ♦ help ♦ take ♦ use*

- 1.Sam wanted to know if Linda ..... the cans to the recycling centre the day before.
- 2.Paul didn't understand the homework, but his teacher promised that she ..... him.
- 3.The mayor thought that we needed more green spaces, so she suggested ..... some trees.
- 4.I forgot my book, but fortunately Wendy offered ..... me hers
- 5.She explained that she ..... solar energy to heat the house then.
- 6.The police officer ordered them ..... their litter and put it in the bin.

#### 2 Complete the reported speech sentences. (7 points)

1. "I've always loved cats," Julie said to me.  
Julie said .....
2. "Are you studying now?" Mike asked Paul.  
Mike asked .....
3. "The wind blew all the pages off this desk,"  
Liam said .....
4. "I'll think of some ideas for your project," Meg offered.  
Meg offered .....
5. "Put the cans in the blue recycling bin," the worker instructed Susan.  
The worker instructed .....
6. "Why don't we volunteer at the recycling plant tomorrow?" Linda suggested.  
Linda suggested .....
7. "Can you please help me answer these questions?" Charles asked me.  
Charles asked .....

**3 Choose the correct reporting verb. Then rewrite the sentences in reported speech. (7 points)**

1. "I'm taking part in the competition," Sarah **warned / announced**.  
.....
2. "You left a big mess in the kitchen," my mother **complained / reminded**.  
.....
3. "Put the sofa here," he **ordered / promised**.  
.....
4. "Has the factory polluted the river?" the mayor **offered / wondered**.  
.....
5. "Let's take the boxes to the recycling centre." Dan **suggested / admitted**.  
.....
6. "I'll pick up the litter now," Paul **offered / enquired**.  
.....
7. "Please don't cut down this tree," Katie **recommended / begged**.  
.....

**4 Complete the text with the correct form of the words in brackets or relative pronouns. (10 points)**

The 2011 Japanese tsunami <sup>1</sup> ..... (kill) 16,000 people and washed five million tonnes of rubbish out to sea. A year later, this rubbish began to arrive on the west coast of the United States. Scientists said that they <sup>2</sup> ..... (expect) the situation <sup>3</sup> ..... (expensive) previous clean-up projects. During the clean-up, bags of rubbish <sup>4</sup> ..... (fly) to an open ship and sent to Seattle for recycling. Janna Stewart, <sup>5</sup> ..... is in charge of the project, said that it <sup>6</sup> ..... (cost) \$17,000 a day to use the open ship. Alaskans asked the federal government <sup>7</sup> ..... (help), but unfortunately, the government hasn't got the budget to clean up remote areas. According to environmental activist Chris Pallister, a specific type of rubbish <sup>8</sup> ..... (wash up) on the beaches since the 2011 tsunami. He is worried because he has found lots of containers filled with chemicals <sup>9</sup> ..... are killing the wildlife. He predicts that this <sup>10</sup> ..... (become) a huge environmental disaster if it isn't taken seriously now.