

QUESTIONS AND ANSWERS

GEARS

This mobile revision pdf is based on detailed work found in the 'GEARS' section.

Tap on the green and yellow link buttons below to go to the website.



Tap the blue button to view all work covered by this Revision PDF



QUESTIONS AND ANSWERS

GEARS

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HOW TO USE THIS REVISION PDF

Read and attempt answering each question, before following the link to a potential answer. Also, consider working in pairs.

QUESTIONS ONE TO FIVE

QUESTIONS SIX TO TEN

QUESTIONS ELEVEN TO FIFTEEN

**TAP / CLICK THE LINK
BUTTON FOR ALL
MOBILE APPS**



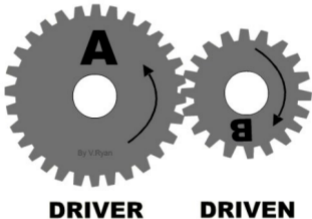
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QUESTION 1a

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This diagram shows 'spur' gears. Why is one gear called the 'driver' and one called the 'driven'??

Tap the image for a potential answer



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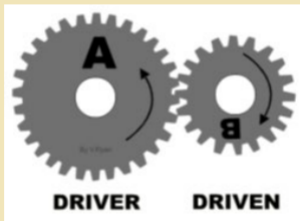
QUESTION 1b

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Gear 'A' has 30 teeth and gear 'B' has 20 teeth. If gear 'A' turns one revolution, how many times will gear 'B' turn?

Which gear revolves the fastest?

Tap the image for a potential answer



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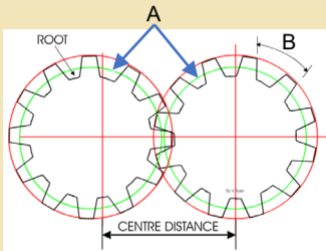
QUESTION 2a

V.Ryan © www.technologystudent.com 2019

Below is a schematic drawing of two gears.

Name parts 'A' and 'B'..

Tap the image for a potential answer



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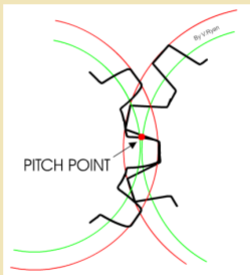


QUESTION 2b

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What is the significance of the 'Pitch Point' of meshing gears?

Tap the images for a potential answer



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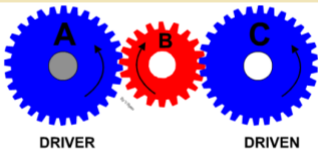
QUESTION 3a

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Name gear 'B', seen between the driver and driven gears.

What is the purpose of this centrally positioned gear ?

Tap the image for a potential answer



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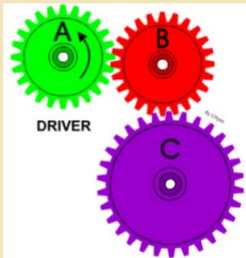
QUESTION 3b

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Gear 'A' rotates in an anticlockwise direction.

Which direction does gear 'B' turn? Which direction does gear 'C' turn?

Tap the image for a potential answer



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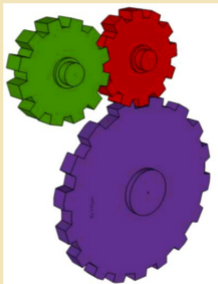


QUESTION 4a

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What is a gear train ?

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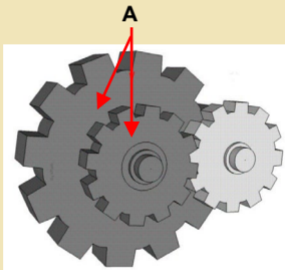


QUESTION 4b

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'A' indicates two gears 'fixed' together. **What is this arrangement of gears called?**

Tap the image for a potential answer



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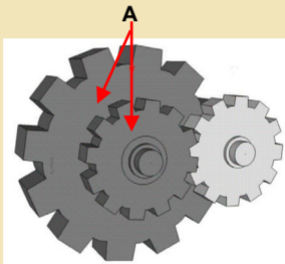


QUESTION 5a

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With reference to the gear arrangement you named in Q4b:
Do both gears rotate at the same speed and direction?

Tap the image for a potential answer



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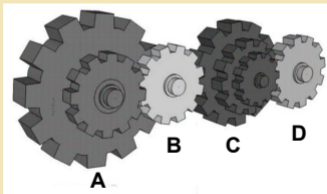


QUESTION 5b

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Which of these gears, is acting as an idler gear?

Tap the image for a potential answer



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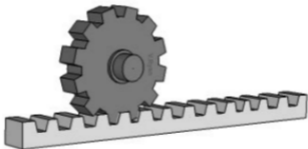


QUESTION 6a

V.Ryan © www.technologystudent.com 2019

Name the type of gear system shown below.

Tap the image for a potential answer



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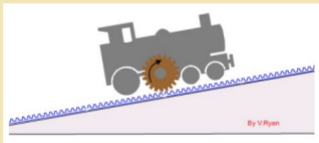


QUESTION 6b

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Why is the gear system you named in the previous question, useful on steep hills and in mountainous areas?

Tap the image for a potential answer



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QUESTION 7

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Name one practical example of a railway that utilises the system you named / described in the previous question.

Tap the image for a potential answer



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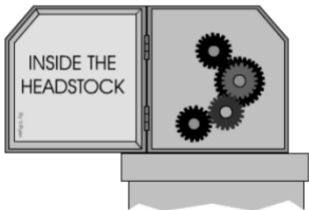


QUESTION 8

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Name a machine that uses a gear system, to change speed?

Tap the image for a potential answer



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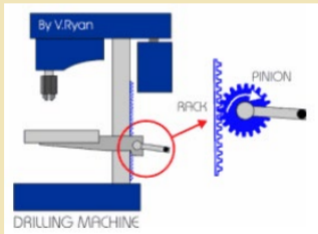


QUESTION 9

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Why is this system of gears ideal for a drilling machine?

Tap the image for a potential answer



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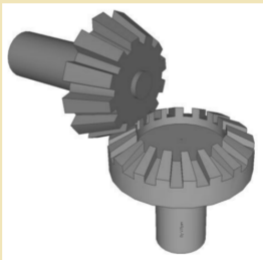


QUESTION 10

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Name this gear system.

Tap the image for a potential answer



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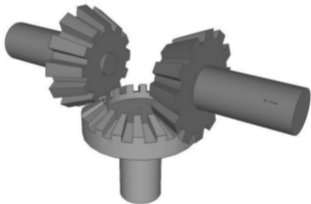


QUESTION 11

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Describe a practical application of the system of gears shown below.

Tap the image for a potential answer



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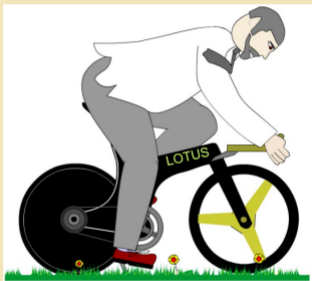


QUESTION 12

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What are the advantages of having a bicycle with gears?

Tap the images for a potential answer



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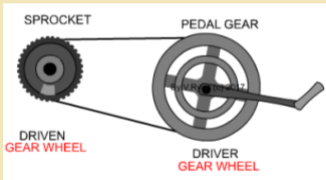


QUESTION 13

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**What is Velocity Ratio
(sometimes called Gear Ratio)?**

Tap the image for a potential answer



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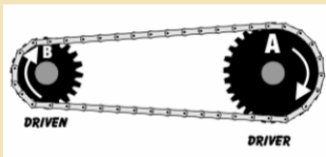


QUESTION 14

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When calculating velocity ratio between the gears on a bicycle, is the chain included as part of the calculation?

Tap the image for a potential answer



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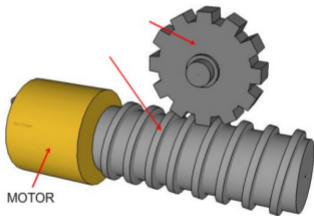


QUESTION 15

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Name the two gears seen below.

Tap the image for a potential answer



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