I'm not robot!

I'm not robot!

Volume of Cylinders B Grade

1. Find the volume of the following cylinders

a)

4 cm

8 cm

_____
_____
_____
_____

b)

10 cm

14 cm

_____
_____
_____
_____

c)

6 cm

12 cm

_____
_____
_____
_____

d)

7 cm

11 cm

_____
_____
_____
_____

e)

5.5 cm

10 cm

_____
_____
_____
_____

f)

12.5 cm

11.5 cm

_____
_____
_____
_____

g)

12 cm

10 cm

_____
_____
_____
_____

h)

20 cm

1.2m

_____
_____
_____
_____

Not drawn to scale

?

Area = $30cm^2$

6cm

8cm

What is the value of the missing dimension?

A   B   C   D

12cm   2cm   5cm   6cm

TBAT calculate missing lengths in polygons

Section A Draw a QUICK, fully labelled copy of the shape in your book.
Name each shape and find the missing length showing your working out in your book.
Remember to write the units

a. Perimeter = 24cm   b. Perimeter = 40m   c. Perimeter=122mm   d. Perimeter=31cm

e. Perimeter=60m   f. Perimeter= 22cm   g. Perimeter= 17cm   h. Perimeter = 38m

Section B Draw a QUICK, fully labelled copy of the shape in your book.
Name each shape and find the overall perimeter showing your working out in your book.
Remember to write the units

The Nitrogen Cycle

Label the numbered boxes correctly with the following:

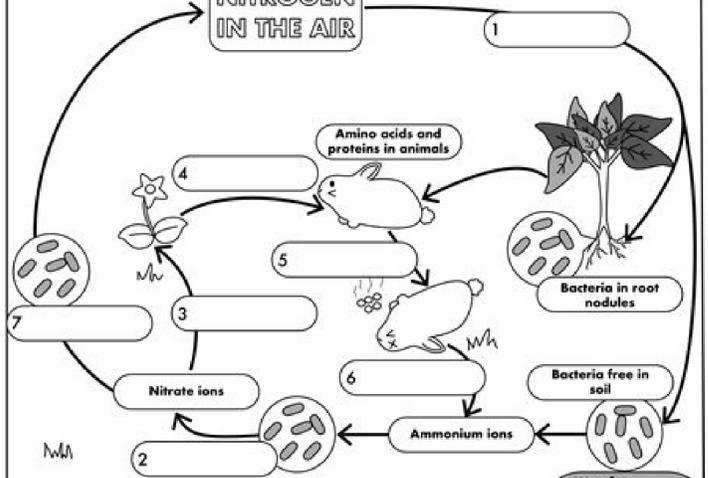- Denitrifying Bacteria
- Nitrifying Bacteria
- Decomposition
- Death and waste
- Nitrogen Fixation
- Uptake by roots
- Feeding

NITROGEN IN THE AIR

1

Amino acids and proteins in animals

4

5

7

Bacteria in root nodules

6

Bacteria free in soil

Nitrate ions

Ammonium ions

2

Key Points

Words to use

legumes · nitrate · bacteria · roots · denitrifying · fixing

- A key type of organism involved in the cycling of nitrogen are _ _ _ _ _ _ _ _.

- Nitrogen- _ _ _ _ _ bacteria are found in the root nodules of _ _ _ _ _ _ _ and can convert inert nitrogen gas into nitrogen-containing ions.

- Nitrifying bacteria can convert ammonium ions to _ _ _ _ _ _ ions, which can be taken up by the _ _ _ _ _ of plants.

- Some bacteria, found in water-logged soils, convert nitrates back into nitrogen gas, these are known as _ _ _ _ _ _ _ _ _ _ _ bacteria.

My Biology Resources 2020

September 19, 2019 corbettmaths arrow_back Back to Topics Index Page Free resources for teachers and students to hopefully make the teaching and learning of mathematics a wee bit easier and more fun. 2001 Yamaha R1 StreetfighterHysteroscopeWheelchair Ramp Clipart This page lists recommended resources for teaching geometry and measure at Key Stage 3/4 organised by topic. Huge thanks to all individuals and organisations who share teaching resources. Quick links: Time | Measures | Loci | Constructions | Compound Measures | Similarity | Congruence | Angle Basics | Angles in Parallel Lines | Bearings | Angles in Polygons | Quadrilaterals | Circle Theorems | Perimeter & Area | Circles | Volume & Surface Area | Real-Life Graphs | 3D Drawing | Coordinates | Symmetry | Shape Transformations | Enlargement | Pythagoras | Trigonometry | Bounds | Vectors | Geometric Proof | Revision Time Units, Scales and Measures [back to top] Loci [back to top] [back to top] All students should calculate the area of a major and minor sector in terms of pi.Most students should calculate the area of compound shapes involving sectors.Some students should calculate the angle or radius of a sector when given the area.Links to Lesson Resources (Members Only)Download Presentation and WorksheetStarter/IntroductionAt the start of the lesson, students recap finding the area of a compound circular shape. If students struggle to formulate an approach, encourage them to break up the diagram into distinct forms, such as a square and four quarter circles or one full circle. Prompts / Questions to considerCan the composite shape be broken up into smaller, distinct areas?The four-quarter circles have the same radius given by the square in the middle. What does this tell us about the sum of their area?To find the sector area, students need to appreciate it as a fraction of a full circle with the same radius. This way, they will understand the angle between the two radii of the sector as the fraction of 360º.To help students understand this, present the blue sector with radius r, (shown left) to the class and discuss what proportion of the circle is made up by the sector.Next, demonstrate how to find the area of the green sector as a simplified multiple of pi. As shown in the video below.After working through questions a) and b), use the Geogebra applet to present questions for the students to attempt on mini-whiteboards.When working through the questions on the third slide, students should include diagrams and give areas in simplified terms of pi. Prompts / Questions to considerCan the fraction of the circle, made up by the sector, be simplified?What is the area of the full circle in pi?How can the composite shape be shown as the sum or difference of two separate areas?PlenaryThe plenary challenges students to find the area of the shaded pink region in the diagram below. Encourage students to use sketches of a right-angled circle, and a sector to see the pink part. This activity takes most students between 8 to 10 minutes. Prompts / Questions to considerHow do the triangle and sector form the shaded area?What is the area of the right-angled triangle?What is the area of the sector?DifferentiationTo challenge the more able students, they could find the angle or radius when given the area. Less able students should work out the area of sectors in simplified terms of pi.Additional Resources Engage and inspire your students while reducing your lesson planning with a Mr Mathematics membership. Last updated22 February 2018This is a notebook presentation and worksheet I prepared for an observation lesson during my NQT year - not ALL information for the example questions are on the slides as this is flexible depending on what the students come up with and how you like to explain how to find the sector. I believe I put it all together from other resources I found on tes that I then adapted (so thank you to the sharers)! The worksheet and plenary are differentiated to bronze silver and gold - obviously the grades will either need removing or updating as you see fit so they are in line with the new specification if required. The answers to the worksheet are on a separate PowerPoint slide. I hope someone finds this useful! Sectors, Area, Problem Solving, differentiated. Creative Commons "Attribution"Select overall rating(no rating)Your rating is required to reflect your happiness.Write a reviewUpdate existing reviewIt's good to leave some feedback.Something went wrong, please try again later.Very helpful Empty reply does not make any sense for the end userEmpty reply does not make any sense for the end userThank you!Empty reply does not make any sense for the end userFantastic exactly what I wanted perfectly differentiated!! Empty reply does not make any sense for the end user for the end userExcellent work, thank you Empty reply does not make any sense for the end userReport this resourceto let us know if it violates our terms and conditions. Our customer service team will review your report and will be in touch. Videos When ready, this area of the site will contain short videos that give clear explanations on concepts and skills. After some worked examples, there will be questions for students to attempt themselves and then they will have the option to watch the vi... Under Development Puzzles One of my biggest joys in maths has always been puzzles and in this section of the site, I share some of my favourites. These puzzles cover a variety of topics and can be used as a starter or as part of a plenary. I will sometimes combine several puz... Under Development Miscellaneous Activities This is a selection of some of my favourite maths tasks that help to develop skills, vocabulary and mathematical thinking. They include (but are not limited to) inquiry-type activities, cross-numbers and word-searches. Many are great for homework tas... Under Development Summary Notes These are brief notes, worked examples and a selection of carefully designed exam-type questions, which are ideal for students to work through so that they are confident they understand what is required of a topic. If students want even more practice... Under Development Posters and Displays I have always liked colourful classrooms and these posters (and other display items) not only help provide a warm and welcoming atmosphere, they can be actively used within teaching and they provide a convenient long-term reference for students. The ... Being Updated... I have been teaching MATHEMATICS (11-16) since 1990. I have regularly been commended on my classroom displays and the quality of my resources as I feel this enriches the student experience. As a self-taught graphic designer I now produce professional quality materials for our academy/academy chain across all departments including posters/banners and promotional materials. I am currently working on updating some older resources as well as developing new ones!Last updated16 January 2021Notes: On worksheets 1-3 i have set the sector as part of a circle shown as a dotted line to remind students that a sector is a fraction of a circle. There may also be some discussion over rounding everything to 1d.p. as in some questions it is probably not suitable. Creative Commons "Sharealike"Select overall rating(no rating)Your rating is required to reflect your happiness.Write a reviewUpdate existing reviewIt's good to leave some feedback.Something went wrong, please try again later.Terrific! Just what my class needed - lots of practice using the equations, Great to see the answerd provided too. Thanks.Thank you ever so much for taking the time to review as not everyone does. I had over 130 000 downloads of my various resources and this is only the 101st review. I'm just glad this one has proved usefulEmpty reply does not make any sense for the end userexcellent resources, so clear for the kids to work from, visually great, using great, using mid setThanks for kind review. I am glad this resource proved useful. It is one of my most downloaded resources.Empty reply does not make any sense for the end userJust what I needed and very clear, thank you!Thank you for your review. I am glad the resource was useful.Empty reply does not make any sense for the end userThis is an excellent resource. Clear questions - easily accessible for Foundation Y10 students; Super notes page and the answers too - what more could you want!
Thank you very much for the resources and time you spent putting this together.Thank you for your kind review. It is good to know that others are find my resources useful.Empty reply does not make any sense for the end userJust what we needed - thanks very muchThank you for your review.
Glad it was useful.Empty reply does not make any sense for the end userReport this resourceto let us know if it violates our terms and conditions. Our customer service team will review your report and will be in touch.

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