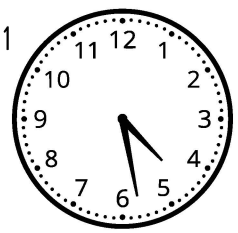
MathsJam Shout

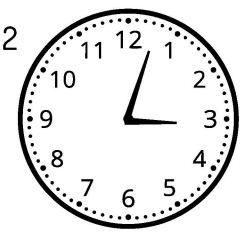
October 2022
(Stardate 300203.31050228310)
Gliese 581c
c/o Bexhill MathsJam

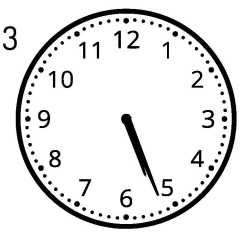
A regular at Bexhill MathsJam who's also an astronomer recently intercepted a communication from a distant planet orbiting Gliese 581, around 20.4 light years away. The planet Gliese 581c is about 5.5 times the size of Earth, and it turns out they also have MathsJam, so they've sent in some contributions for this month's Shout (luckily, maths is the universal language of the cosmos). If you need guidance, e-mail Alji Bra at **alji.bra@gliese581.mw**.

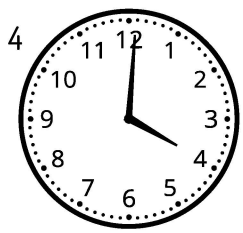
Puzzle Clock Work

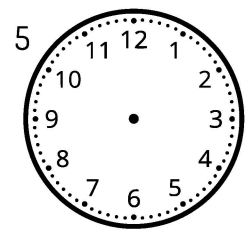
We know you Earthlings use a strange duodecimal system for your clocks, so we set this problem just for you. Draw the missing hands on the final clock.

1 

2 

3 

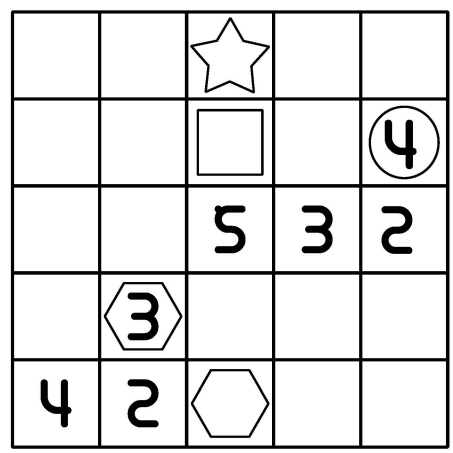
4 

5 

Puzzle Combiku

We thought you might enjoy this puzzle format, which is surprisingly popular here.

Each horizontal row and vertical column should contain different shapes and different numbers. Each square will contain one number and one shape, and no combination may be repeated elsewhere in the puzzle.



Proof Who Needs Calculus?

Our mathematicians have rejected calculus as too easy - using only simple algebra, show that the surface area of a sphere is equal to $4\pi r^2$ where r is the radius of the sphere. The use of standard geometric formulae is permitted.

Can you apply the same method to find the surface area of an ellipsoid?

MathsJam Shout is a monthly sheet of ideas for activities to do at a MathsJam night. It's created using suggestions from a different MathsJam each month, and if you'd like to submit suggestions for a month in the future, email **katie@mathsjam.com** for details.

MathsJam is a monthly opportunity for like-minded self-confessed maths enthusiasts to get together in a pub and share stuff they like. Puzzles, games, problems, or just anything they think is cool or interesting. Monthly MathsJam nights happen in over 70 locations around the world, on the second-to-last Tuesday of each month. To find your nearest MathsJam, visit the website at **www.mathsjam.com**.