

#36 – TOP 10 nástrojů pro online výuku matematiky

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Projekt Česko.Digital,
komunity expertních dobrovolníků

 učímeonline.cz



500 škol

Technologická pomoc



1030 zařízení

Sbírka počítačů



35 webinarů

Učíme nanečisto

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Dotazy pokládejte na:

Google Meet chat

Sli.do #UN36

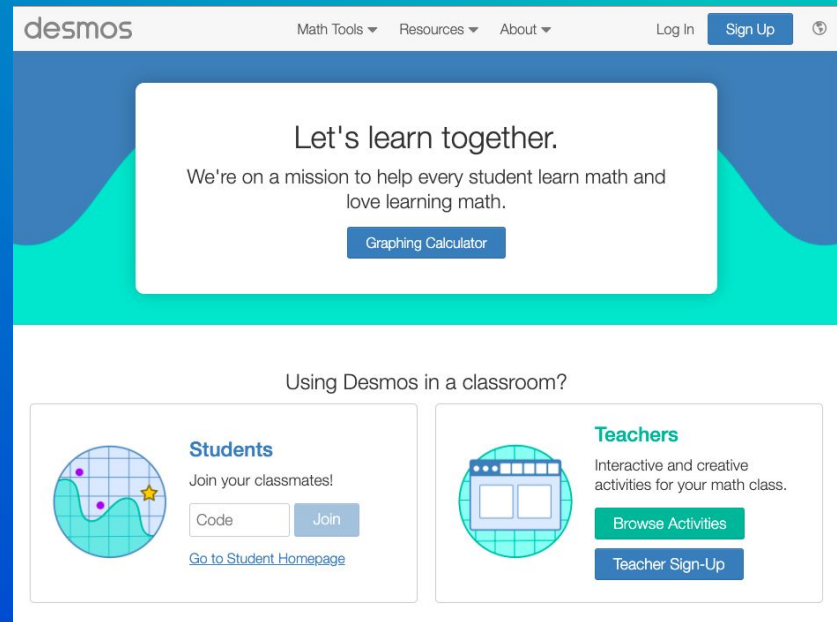
- **velmi subjektivní
výběr**
- **jen inspirace**



procvičování
modelování
nástroje pro práci se třídou
pomůcky pro učitele
zajímavé stránky

Desmos

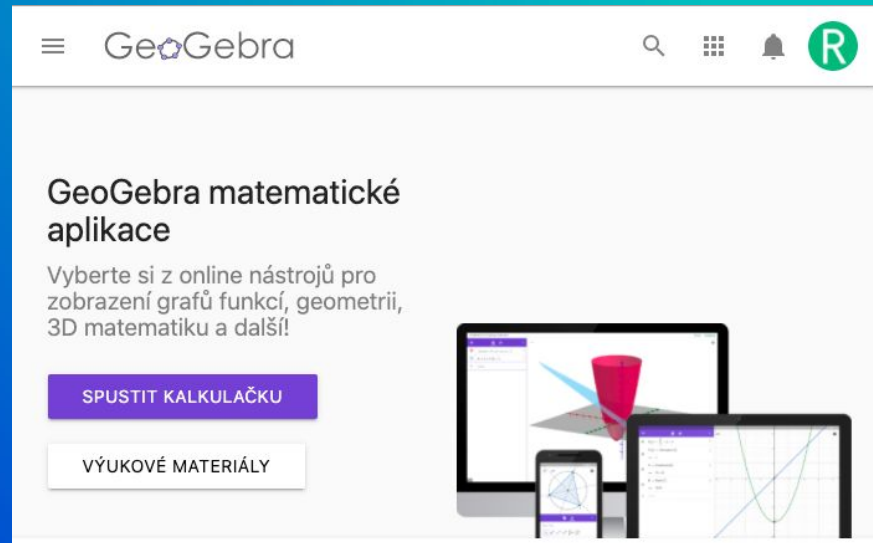
<https://www.desmos.com/>



The screenshot shows the Desmos website homepage. At the top, the navigation bar includes the 'desmos' logo, 'Math Tools', 'Resources', 'About', 'Log In', and a 'Sign Up' button. The main content area features a large white box with the text 'Let's learn together.' and 'We're on a mission to help every student learn math and love learning math.', with a 'Graphing Calculator' button below. Below this, a section titled 'Using Desmos in a classroom?' is divided into two columns. The 'Students' column includes an icon of a graph, the text 'Join your classmates!', a 'Code' input field, a 'Join' button, and a link to 'Go to Student Homepage'. The 'Teachers' column includes an icon of a computer screen, the text 'Interactive and creative activities for your math class.', a 'Browse Activities' button, and a 'Teacher Sign-Up' button.

GeoGebra

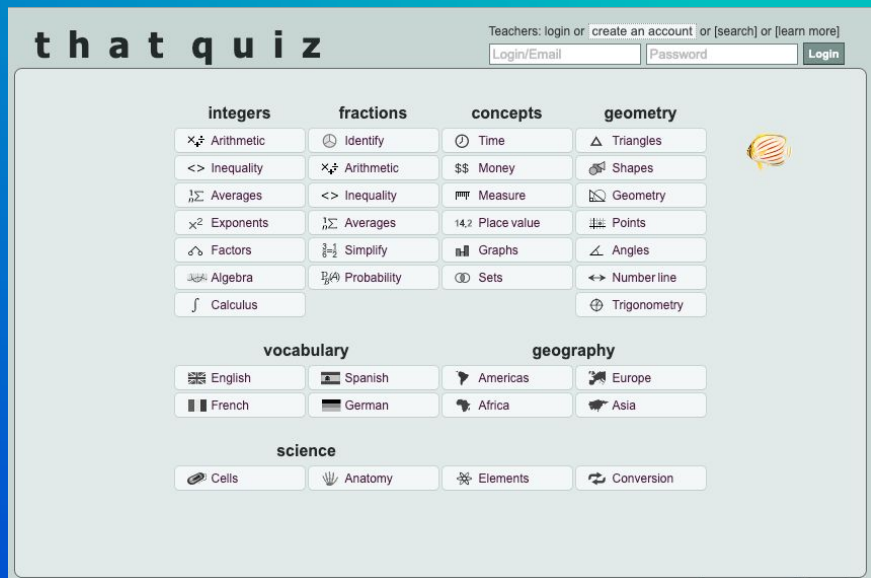
<https://www.geogebra.org/>



The screenshot shows the GeoGebra website interface. At the top, there is a navigation bar with a hamburger menu icon, the text "GeoGebra", a search icon, a grid icon, a notification bell icon, and a user profile icon with the letter "R". Below the navigation bar, the main content area features the heading "GeoGebra matematické aplikace" (GeoGebra mathematical applications). Underneath this heading is a descriptive paragraph: "Vyberte si z online nástrojů pro zobrazení grafů funkcí, geometrii, 3D matematiku a další!" (Choose from online tools for displaying function graphs, geometry, 3D mathematics, and more!). There are two prominent buttons: a purple button labeled "SPUSTIT KALKULAČKU" (Start Calculator) and a white button with a grey border labeled "VÝUKOVÉ MATERIÁLY" (Educational Materials). To the right of the text and buttons is a collage of images showing the GeoGebra software interface on various devices: a desktop monitor displaying a 3D cone, a tablet showing a graph, and a smartphone displaying a geometric diagram.

ThatQuiz

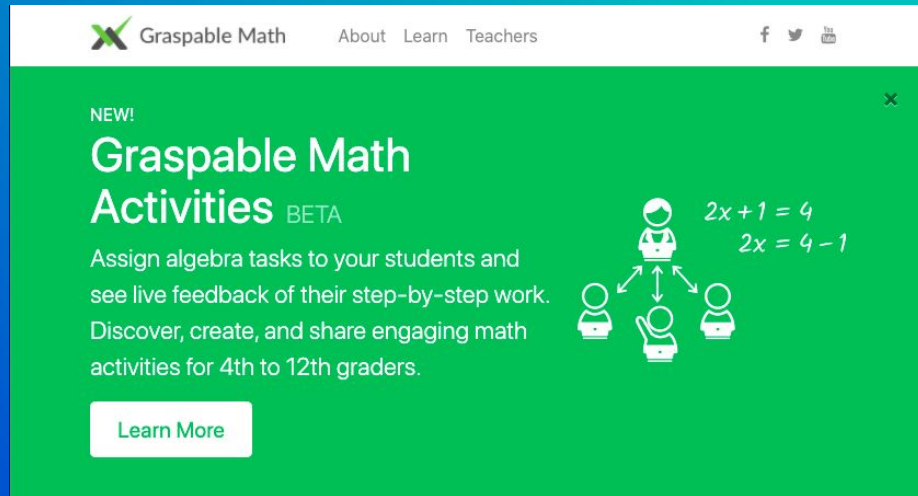
<https://www.thatquiz.org/>



The screenshot shows the ThatQuiz website interface. At the top, the logo "thatquiz" is displayed in a stylized font. To the right of the logo, there is a navigation bar with links for "Teachers: login or create an account or [search] or [learn more]". Below this, there are input fields for "Login/Email" and "Password", and a "Login" button. The main content area is organized into several categories, each with a grid of buttons representing different topics. The categories are: integers, fractions, concepts, geometry, vocabulary, geography, and science. Each button includes a small icon and the topic name. For example, under "integers", there are buttons for "Arithmetic", "Inequality", "Averages", "Exponents", "Factors", and "Algebra". Under "fractions", there are buttons for "Identify", "Arithmetic", "Inequality", "Averages", "Simplify", and "Probability". Under "concepts", there are buttons for "Time", "Money", "Measure", "Place value", "Sets", and "Graphs". Under "geometry", there are buttons for "Triangles", "Shapes", "Geometry", "Points", "Angles", "Number line", and "Trigonometry". Under "vocabulary", there are buttons for "English", "French", "Spanish", and "German". Under "geography", there are buttons for "Americas", "Africa", "Europe", and "Asia". Under "science", there are buttons for "Cells", "Anatomy", "Elements", and "Conversion".

GraspableMath

<https://graspablemath.com/>



The screenshot shows the Graspable Math website interface. At the top, there is a navigation bar with the logo, the text "Graspable Math", and links for "About", "Learn", and "Teachers". Social media icons for Facebook, Twitter, and YouTube are also present. The main content area has a green background and features a "NEW!" announcement for "Graspable Math Activities BETA". The text describes the platform's ability to assign algebra tasks and provide live feedback. A diagram illustrates a teacher at the top with arrows pointing to three students below. To the right of the diagram, the algebraic equations $2x + 1 = 4$ and $2x = 4 - 1$ are shown. A "Learn More" button is located at the bottom of the announcement.

Graspable Math About Learn Teachers f t y

NEW!

Graspable Math Activities BETA

Assign algebra tasks to your students and see live feedback of their step-by-step work. Discover, create, and share engaging math activities for 4th to 12th graders.

[Learn More](#)

$2x + 1 = 4$
 $2x = 4 - 1$

MathLearning Center

<https://www.mathlearningcenter.org/>



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[Apple App Store](#)
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SUPPORTS SHARING!

Geoboard

The Geoboard app is a tool for exploring a variety of mathematical topics introduced in the elementary and middle grades. Learners stretch bands around the pegs to form line segments and polygons and make discoveries about perimeter, area, angles, congruence, fractions, and more.



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SUPPORTS SHARING!

Number Frames

Number Frames help students structure numbers to 5, 10, 20, and 100. Students use the frames to count, represent, compare, and compute with numbers in a particular range.



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SUPPORTS SHARING!

Number Pieces

Number Pieces helps students develop a deeper understanding of place value while building their computation skills with multi-digit numbers. Students use the pieces to represent multi-digit numbers, regroup, add,



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SUPPORTS SHARING!

Math Clock

Math Clock helps students become fluent working with time. Learners use analog clocks with geared or free-moving hands to learn how to tell time, explore jumps with count by numbers, and visualize story problems involving intervals of time.



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SUPPORTS SHARING!

Number Line

Number Line helps students visualize number sequences and illustrate strategies for counting, comparing, adding, subtracting, multiplying, and dividing. Choose number lines labelled with whole numbers, fractions, decimals.



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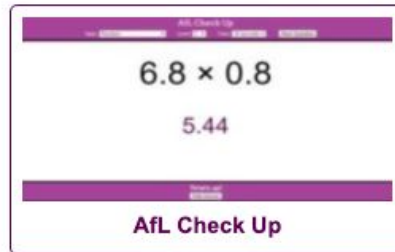
SUPPORTS SHARING!

Number Rack

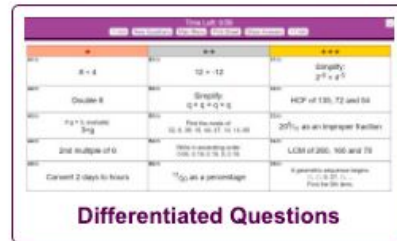
Number Rack facilitates the natural development of children's number sense. Rows of movable, colored beads encourage learners to think in groups of fives and tens, helping them to explore and discover a

MathsBot

<https://mathsbot.com/>



A screenshot of the 'AfL Check Up' interface. It features a purple header with the text 'AfL Check Up' and '100%'. The main content area displays the multiplication problem 6.8×0.8 and the result 5.44 . Below the problem, there is a purple bar with the text 'AfL Check Up'.



A screenshot of the 'Differentiated Questions' interface. It features a purple header with the text 'Differentiated Questions' and '100%'. Below the header, there is a grid of math problems. The problems are arranged in a 3x3 grid. The first row contains: $a = 4$, $12 = 12$, and 'Simplify: $2^3 \times 2^2$ '. The second row contains: 'Double 8', 'Simplify: $3^2 + 4 \times 5$ ', and 'HCF of 120, 72 and 60'. The third row contains: '70% of 4000', 'Convert 100 g to kg', '20% as an improper fraction', '2nd multiple of 0', 'Write in ascending order: 100, 0, 10, 2, 0, 10', 'LCM of 200, 100 and 50', 'Convert 2 days to hours', '10% as a percentage', and 'A parallelogram has sides 12 cm, 8 cm, 12 cm, 8 cm. Find its area'.



A screenshot of the 'Topic Ladder' interface. It features a purple header with the text 'Topic Ladder' and '100%'. Below the header, there is a grid of math topics. The grid is arranged in a 3x3 grid. The first row contains: 'Addition', 'Subtraction', 'Multiplication', 'Division', and 'Fractions'. The second row contains: 'Decimals', 'Percentages', 'Algebra', 'Geometry', and 'Statistics'. The third row contains: 'Probability', 'Sets', 'Number Systems', 'Ratios', and 'Proportions'.



A screenshot of the 'Worksheet generator' interface. It features a purple header with the text 'Worksheet generator' and '100%'. Below the header, there is a grid of math topics. The grid is arranged in a 3x3 grid. The first row contains: 'Addition', 'Subtraction', 'Multiplication', 'Division', and 'Fractions'. The second row contains: 'Decimals', 'Percentages', 'Algebra', 'Geometry', and 'Statistics'. The third row contains: 'Probability', 'Sets', 'Number Systems', 'Ratios', and 'Proportions'.

Form Time Numeracy

<https://formtimeideas.com/numeracy>

Sunday
18th October 2020

Form Time Numeracy

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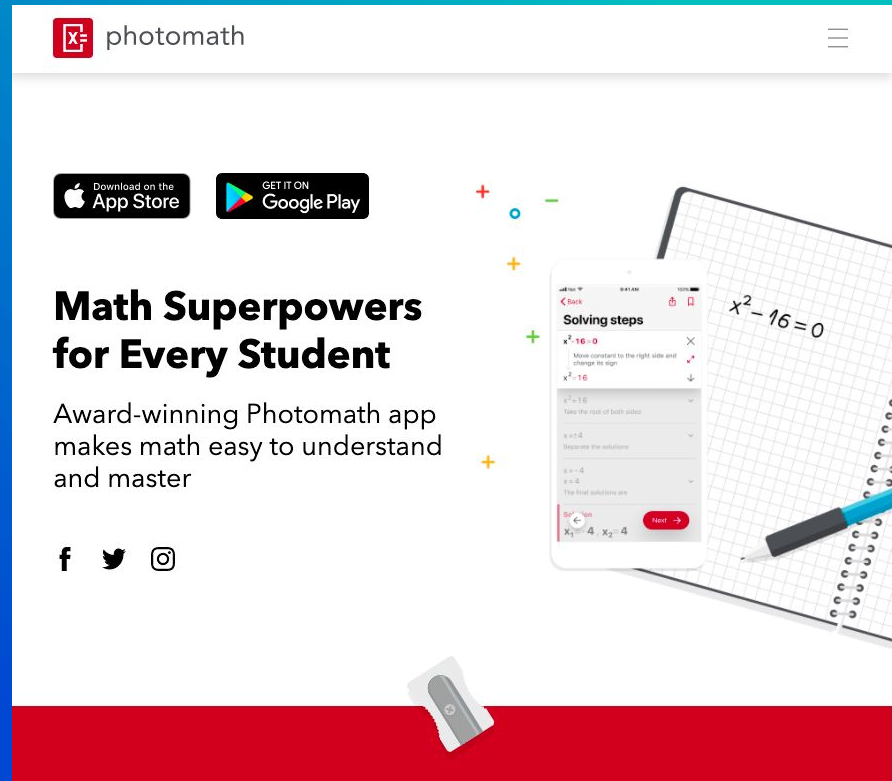
Questions covering a range of topics to help your tutor group improve and revise their maths skills.

Home Circle Time Facts Flags Jokes Literacy Memory News Numeracy Quotes Videos

Arithmetic $403 - 258$ Show answer	Negative numbers $(-4) \div 2$ Show answer	Order of operations $4^2 + 7 - 5$ Show answer
Equations $10z - 9 = 11$ Show answer	Rounding Round 688763 to the nearest 100000. Show answer	Fractions $\frac{4}{5} - \frac{4}{8}$ Show answer
Powers of ten 1.5×1000 Show answer	Ratio A number was shared in the ratio 7:8. The smaller share was 7.	Percentages Find 2% of 20. Show answer

PhotoMath

<https://photomath.app/en/>



The advertisement features the Photomath logo at the top left. Below it are two buttons: 'Download on the App Store' and 'GET IT ON Google Play'. The main headline reads 'Math Superpowers for Every Student'. Below the headline is the text 'Award-winning Photomath app makes math easy to understand and master'. At the bottom left of the ad are social media icons for Facebook, Twitter, and Instagram. The central image shows a smartphone displaying the app's 'Solving steps' for the equation $x^2 - 16 = 0$. The steps shown are: $x^2 - 16 = 0$, $x^2 = 16$, 'Take the root of both sides', $x = \pm 4$, 'Separate the solutions', $x = -4$, $x = 4$, and 'The final solutions are'. The final solutions are listed as $x_1 = -4$ and $x_2 = 4$. A red 'Test' button is visible. In the background, there is a notebook with the equation $x^2 - 16 = 0$ written on it and a blue pen. A pencil sharpener is shown at the bottom right of the ad.

photomath

Download on the App Store

GET IT ON Google Play

Math Superpowers for Every Student

Award-winning Photomath app makes math easy to understand and master

f t i

Solving steps

$x^2 - 16 = 0$

Move constant to the right side and change its sign:

$x^2 = 16$

Take the root of both sides:

$x = \pm 4$

Separate the solutions:

$x = -4$

$x = 4$

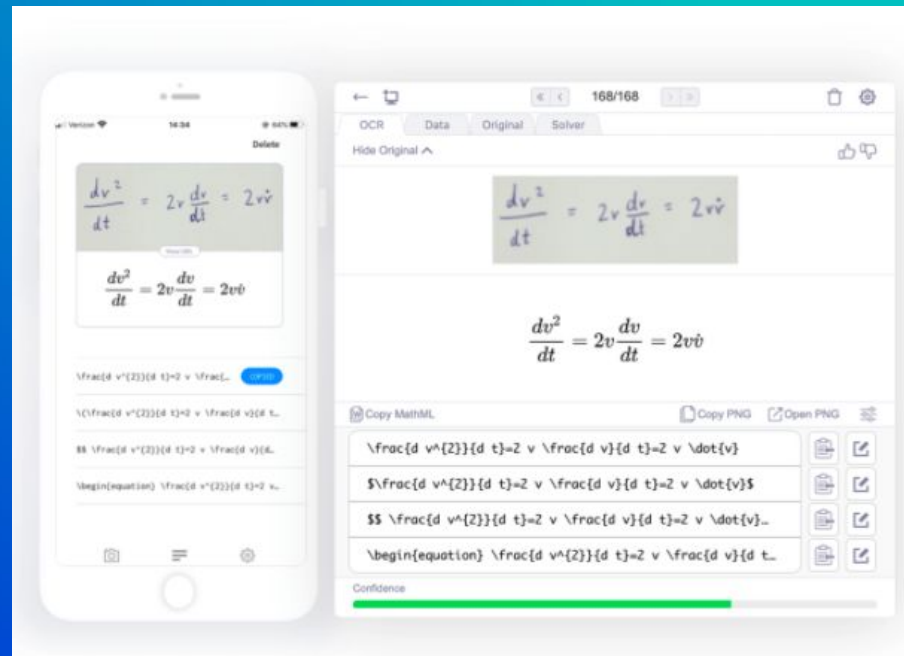
The final solutions are:

$x_1 = -4$ $x_2 = 4$ Test

$x^2 - 16 = 0$

MathPix Snip

<https://mathpix.com/>



Resourceholic

<https://www.resourceaholic.com/>

27 September 2020

5 Maths Gems #135

Welcome to my 135th gems post. This is where I share some of the latest news, ideas and resources for maths teachers.



I think we have a winner for the most intense September of all time! I can't believe I complained about how busy I was during lockdown - September 2020 has been a whole new level of exhaustion! I'm sure many of you are in the same boat. I haven't had time to blog, or even tweet, because I've been working until I go to bed every evening. But it's ok, because I know September is always a killer, and I know it's doubly difficult this year because of a global pandemic which is outside my control, and I know it *will* get easier.

Anyway, on with the gems... I have ten for you again today.

1. Booklets

Thank you to Ben Sinclair (@mathsacharya) for starting to share the GCSE and A Level **knowledge booklets** that he uses in his teaching. These are high quality, and it's really interesting to see a booklet approach in action. Ben has borrowed lots of excellent tasks for these booklets, including plenty of Don Stewart.



What is the difference between a **face** and a **surface**?

A **face** has to be a flat 2D shape like the base of a cone, whereas a **surface** can be curved like in the curved surface of the cone. A **polyhedra** is made up of faces and has no curved surfaces!

PURPOSEFUL PRACTICE 4:

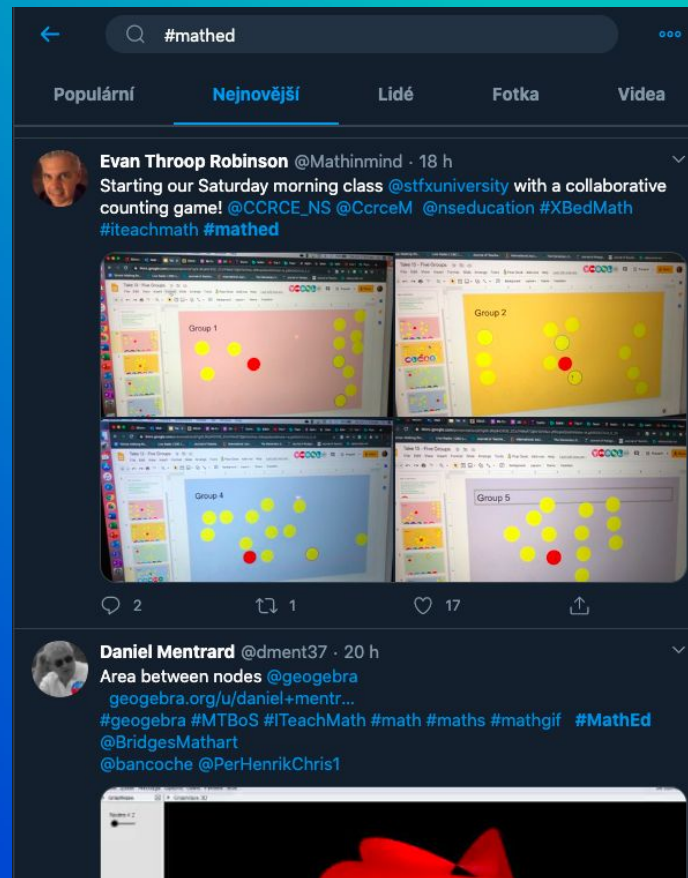
Give the **name** of each of these 3D shapes, and decide if they are **polyhedrons** or **not**:

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)

za 11.

Twitter

<https://twitter.com/>



Dotazy:

[www.Sli.do](https://www.sli.do) kód: #UN36

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Zveme Vás na další webináře

ČT 29.10. ve 20:00 Jak technologie může šetřit čas a energii (nejen) v online výuce

SO 31.10. ve 20:00 Jak vyučovat dějepis distančně?

ST 4.11. v 18:00 TOP aplikace a nástroje pro online výuku napříč předměty

Další termíny na ucimeonline.cz.

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