

Halloween maths activities for CBSE Class 10

CBSE Math Revision · CBSE Class 10 (Class 9 can try most of it) · 31 October · Student sheet

Name _____

Class _____

Date _____

No calculator. Every answer works out exactly; use $\pi = 22/7$ where a question says so.

Starter (5 minutes)

1. Find the 10th term of the AP 3, 7, 11, ...
2. Find the distance of the point (6, 8) from the origin.
3. A die is thrown once. Find the probability of getting a prime number.
4. Find the surface area of a sphere of radius 7 cm. (Use $\pi = 22/7$.)

Main activity (35 minutes)

Task A: The lantern parade

Children walk in a lantern parade. The first row has 5 children, and each row has 3 more children than the row in front.

- a. How many children are in the 12th row?
- b. How many children are in the first 12 rows altogether?
- c. There are 390 children in the parade, and every row is full. How many rows are there?

Task B: Pumpkins and candles

Use $\pi = 22/7$.

- a. A pumpkin is a sphere of radius 10.5 cm. Find its volume.
- b. Find the surface area of the same pumpkin.
- c. A cylinder of wax of radius 7 cm and height 14 cm is melted and made into spherical 'eyeball' candles of radius 3.5 cm. How many candles can be made?

Task C: The sweet bowl

A bowl has 8 toffees, 5 lollipops and 7 chocolate bars. One sweet is taken at random.

- Find the probability that it is a lollipop.
- Find the probability that it is not a chocolate bar.
- Two toffees are eaten first. Now find the probability of taking a toffee.
- Starting again with the full bowl, how many extra toffees must be added so that the probability of a toffee is $\frac{1}{2}$?

Task D: Haunted house maze

A ghost glides in a straight line from $A(-2, 3)$ to $B(6, -3)$ on the plan of a haunted house.

- Find the length AB .
- A trapdoor P divides AB in the ratio $1 : 3$. Find P .
- The chest is at $C(6, 3)$. Show that triangle ABC has a right angle at C , and find its area.

Extension

- Find the point on the y -axis that is the same distance from $A(-2, 3)$ and $B(6, -3)$.
- The radius of a spherical pumpkin increases by 50%. By what percentage does its surface area increase?