Diwali maths activities for IB Maths SL and HL: MYP / KS3

IB Math Revision · MYP / KS3 (ages 11 to 14) · Student sheet

Name _____ Class _____ Date _____

No calculator needed. Use π = 22/7 where a question says so.

Starter (5 minutes)

1. How many lines of symmetry does a square rangoli tile have?

2. A box holds 40 diyas and 3/8 of them are blue. How many are blue?

3. A box of sweets costs ₹240. In a festival sale it is 10% off. What is the sale price?

4. What is the sum of the interior angles of a pentagon?

Main activity (30 minutes)

Task A: Rangoli patterns

Rangoli designs are drawn on the floor with coloured powder, often with rotational symmetry.

a. A rangoli is a regular octagon. Find the size of each exterior angle.

b. Find each interior angle of the octagon.

c. Another rangoli is made from a 20 cm square by cutting off a right-angled triangle, with shorter sides of 6 cm, at each corner. Find the area of the shape that is left.

Task B: Diyas and lights

A diya is a small clay lamp. This one has a circular top of radius 7 cm.

a. Taking π = 22/7, find the area of the top of the diya.

b. Taking π = 22/7, find the circumference of the top.

c. A string of 120 lights has red, green and gold lights in the ratio 3 :4 : 5. How many lights are gold?

d. The string is lit for 5 hours a night for 6 nights. Each hour of lighting costs ₹1.50. Find the total cost.

Extension

1. A rangoli has 1 dot in the middle, then rings of 6, 12, 18, ... dots, each ring with 6 more than the last. How many dots are there with the middle dot and 5 rings?