

Pumpkin Patch Maths

Money, percentages, ratio and area at a Halloween pumpkin farm.



AGES
11-14

Name _____

Class _____

Date _____

Calculators allowed. Show your working in the grid under each question. Give money answers to the nearest penny.

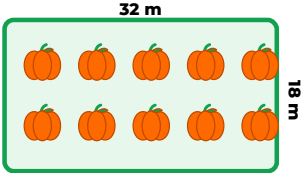
Pumpkin prices

Small pumpkin	£1.85
Medium pumpkin	£2.60
Large pumpkin	£4.35
Giant pumpkin	£7.90

Lantern extras

LED tea lights, pack of 6	£3.30
LED tea lights, pack of 24	£11.76
Carving kit	£4.75
Saturday deal	20% off giants

- A family buys 3 small pumpkins and 2 medium pumpkins. (a) How much do they spend? (b) How much change do they get from a £20 note?
- Using the Saturday deal, how much does a giant pumpkin cost on a Saturday?
- A class has a budget of £60. It buys 12 medium pumpkins, 2 packs of 6 LED tea lights and 2 carving kits. (a) Find the total cost. (b) How much of the budget is left? (c) How many **small** pumpkins could the class buy with the money left?
- The pumpkin patch is a rectangle 32 m long and 18 m wide. (a) Find its area. (b) Each pumpkin plant needs 4 m². How many plants fit? (c) Each plant grows 2.5 pumpkins on average. How many pumpkins is that?


- The farm's 360 pumpkins are orange, white and green in the ratio 6 : 2 : 1. How many of each colour are there?
- Last year 1,250 people visited the farm. This year 1,450 visited. Find the percentage increase.
- A round pumpkin is 28 cm across. Using $\pi = 3.14$, find the distance around its middle (its circumference).
- Growing the 360 pumpkins cost the farm £450. It sells 85% of them for £2.60 each. (a) How many does it sell? (b) How much money comes in? (c) Find the profit. (d) Write the profit as a percentage of the cost, to 1 decimal place.
- Which pack of LED tea lights is better value? Show the cost of **one** tea light in each pack.