

FIRST NAME SURNAME

SCHOOL DATE



SMOOTHMATHS

11 PLUS EXAMINATION

MATHEMATICS

SAMPLE PAPER 1

Paper ID: SM-11MATH-A14

Please read the following before you begin

- Please attempt all questions.
- Keep all your work neatly within the answer spaces provided.
- Show all your working out clearly on the paper.
- Calculators are not allowed.

TOTAL MARKS: 60

TIME ALLOWED: 45 MINUTES

STUDENT SCORE:/60



Sample paper produced independently by SmoothMaths, inspired by the question style and structure often seen in leading independent school and 11+ entrance exams.
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1. a) Ali buys 12 cupcakes and 5 pies. Cupcakes cost 15p each, and pies cost 25p each. How much did Ali spend in total?

Answer:

b) Cookies are sold in packs of 10. Each pack costs 85p. Sophie has £4.50. How many cookies can Sophie buy, and how much money does she have left over?

Answer:

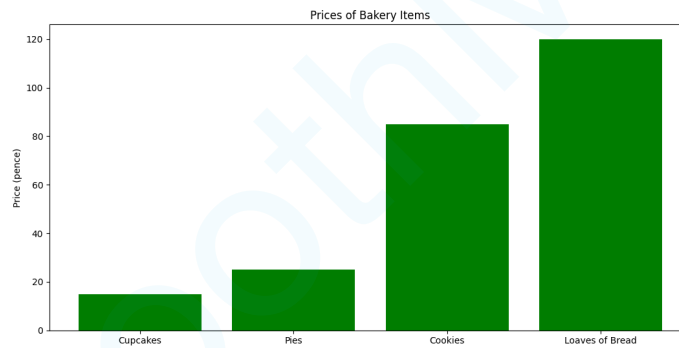
c) Jamal buys 20 loaves of bread and receives £7.20 change from a £15 note. What is the price of one loaf of bread?

Answer:

d) 6 large cakes cost the same as 4 muffins. Martha buys 8 muffins for £4.80. What is the cost of 12 large cakes?

Answer:

e) A baker has 120 items to sell at the market. On Monday, she sells a quarter of the items. On Tuesday, she sells half of the remaining items. What fraction of her original stock does she have left to sell on Wednesday?



Answer:

2. Mr White is arranging flowers into patterns. His patterns form a sequence.

Pattern 1: 4 flowers

Pattern 2: 7 flowers

Pattern 3: 10 flowers

Pattern 4: 13 flowers

a) How many flowers are needed to make Pattern 8?

Answer:

b) Which pattern is made from 88 flowers?

Answer:

Mr Green is also arranging flowers.

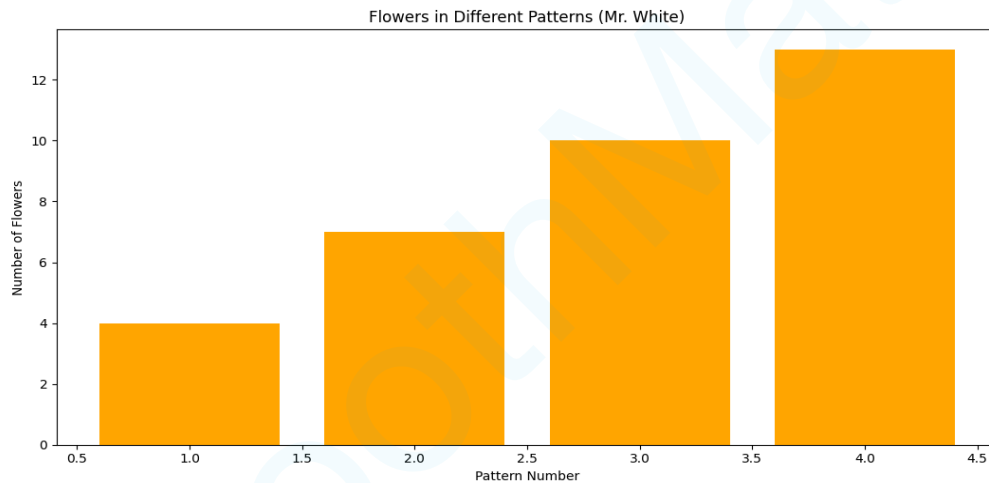
Pattern 1: 6 flowers

Pattern 2: 12 flowers

Pattern 3: 18 flowers

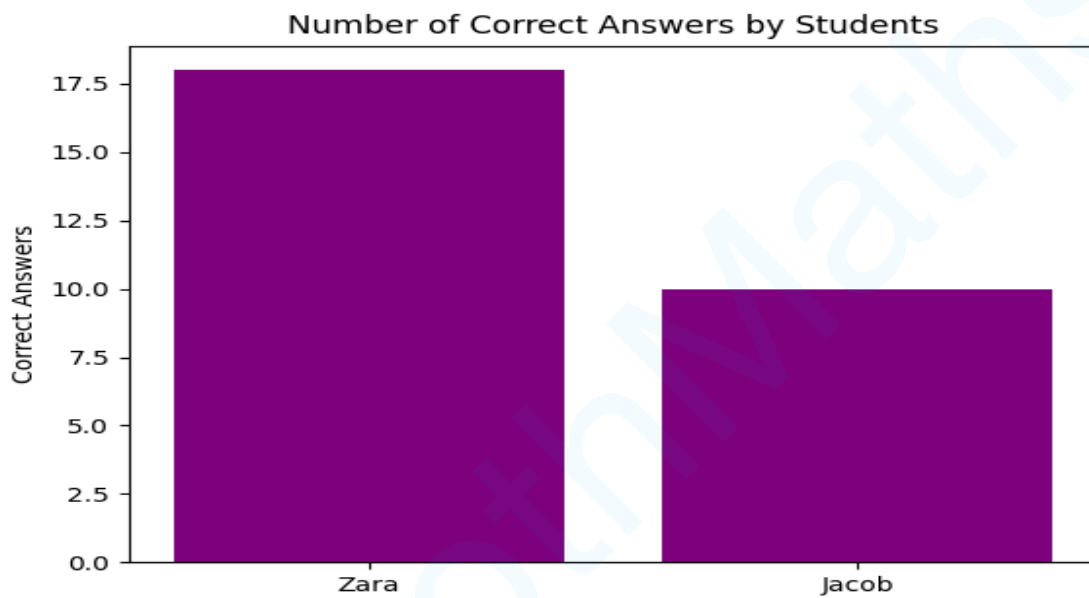
Pattern 4: 24 flowers

c) Explain why it is not possible for Mr Green to make a pattern using 125 flowers:



Answer:

d) A school organizes students into equal-sized groups. There are more groups in Year 6 than in Year 5. Year 6 has 180 students, and Year 5 has 120 students. What is the largest number of students in each group?



Answer:

e) A library offers books in English and Spanish. All 140 members borrow at least one book. 90 members borrow English books, and 60 members borrow Spanish books. How many members borrow only one language?

Answer:

3. a) Mia mixes orange juice and soda water to make a drink. She uses twice as much soda water as orange juice. Mia uses 800ml of soda water. How much drink does she make?

Answer:

b) A smoothie is made by mixing fruit pulp and milk. 50ml of fruit pulp is needed to make 750ml of smoothie. How much milk is needed to make 600ml of smoothie?

Answer:

c) In a maths competition, students answer 25 questions. 4 marks are awarded for each correct answer, but 2 marks are subtracted for each incorrect answer. Zara scores 8 more marks than Jacob, and together they score 80 marks. How many questions did Jacob answer correctly?

Answer:

d) Complete the puzzles below:

Circle 1	Circle 2	Square
3	4	12
5	?	30

Row 2:

$$5 \times ? = 30$$

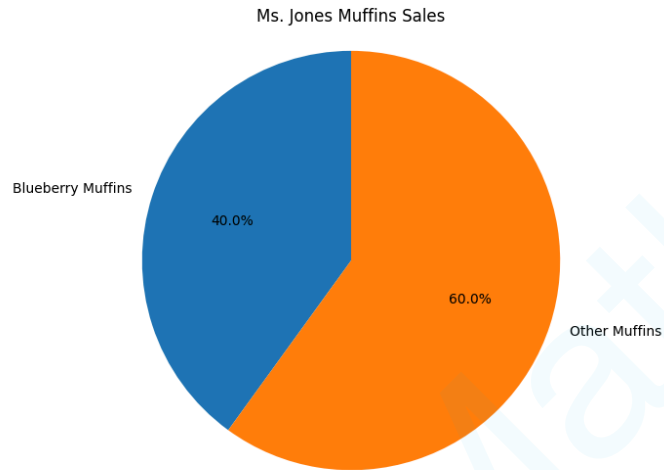
Answer:

Circle 1	Circle 2	Square
6	6	36
8	?	64

$$8 \times ? = 64$$

Answer:

4. a) Ms. Jones sells muffins at her bakery. Yesterday she sold 240 muffins. 40% of them were blueberry muffins. How many blueberry muffins did she sell?



Answer:

b) Today Ms. Jones sells 520 muffins, and 130 of them are chocolate muffins. What percentage of today's muffins are chocolate?

Answer:

c) A loaf of bread is on sale for £1.05 after a 30% price reduction. What was the price before the sale?

Answer:

d) Emma buys 4 brownies and 6 cookies for £4.10. Noah buys 4 brownies and 3 cookies for £2.75. What is the price of one brownie and one cookie?

Answer:

e) Ms. Jones's income comes from selling cakes, pastries, and cookies. Half of her income is from cakes. The rest is split evenly between pastries and cookies. If she makes £480 from pastries, how much does she make in total?

Answer: