FIRST NAME ..... SURNAME .....

SCHOOL ..... DATE .....

SMOOTHMATHS

11 PLUS EXAMINATION

MATHEMATICS

SAMPLE PAPER 1

Paper ID: SM-11MATH-A19

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: 100

TIME ALLOWED: 1 HOUR

STUDENT SCORE: ...../100

1.a) 234 + 487

Answer:

b) 1056 – 478

Answer:

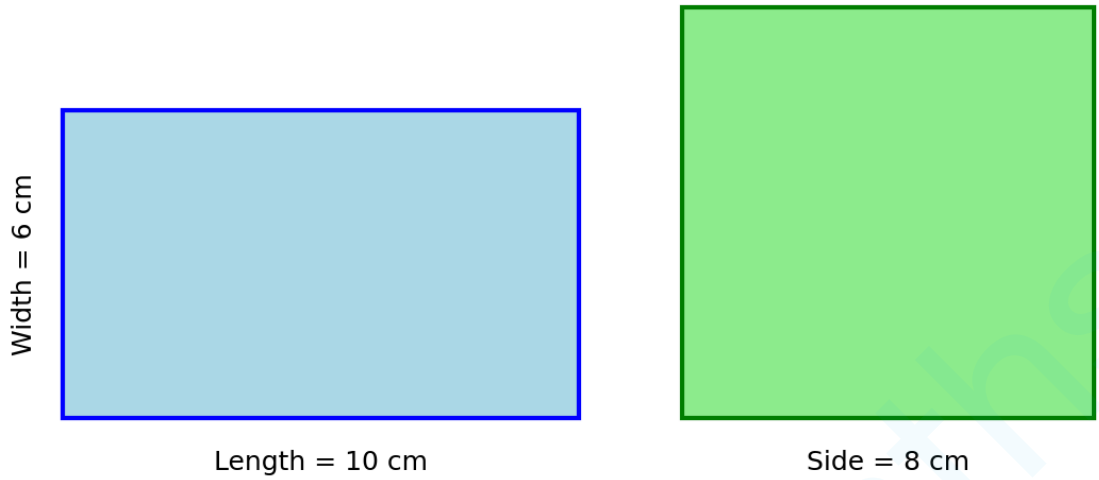
c) 245 × 7

Answer:

d) 567 ÷ 9

Answer:

2.



A rectangle has a width of 6 cm and a length of 10 cm.

a) Find its perimeter.

Answer:

b) Find its area.

Answer:

Now consider a square with the same perimeter as the rectangle:

c) Find the side length of the square.

Answer:

d) Find the area of the square.

Answer:

3. a) Simplify: $\frac{5}{8} + \frac{7}{16}$

Answer:

b) Subtract: $2\frac{1}{3} - 1\frac{2}{5}$

Answer:

4. a) Find 15% of £120.

Answer:

b) Increase £85 by 12%.

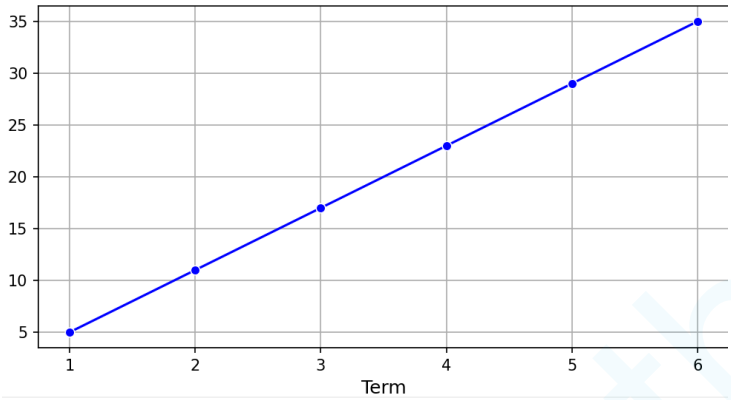
Answer:

c) A shirt originally costs £50 but is on sale for 30% off. What is the sale price?

Answer:

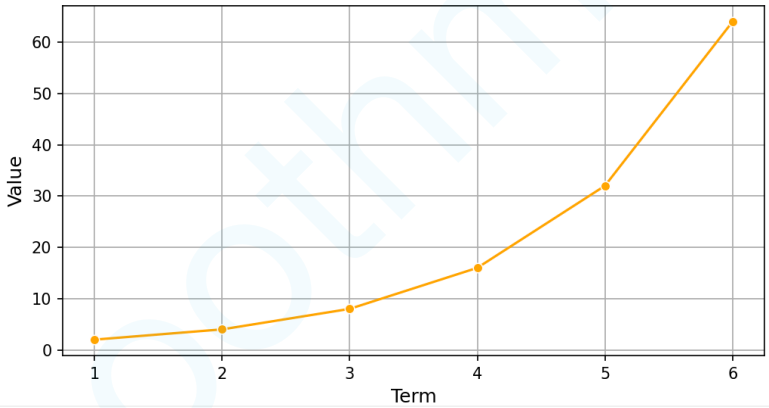
5. Find the next two terms in each sequence:

a) 5, 11, 17, 23, __, __



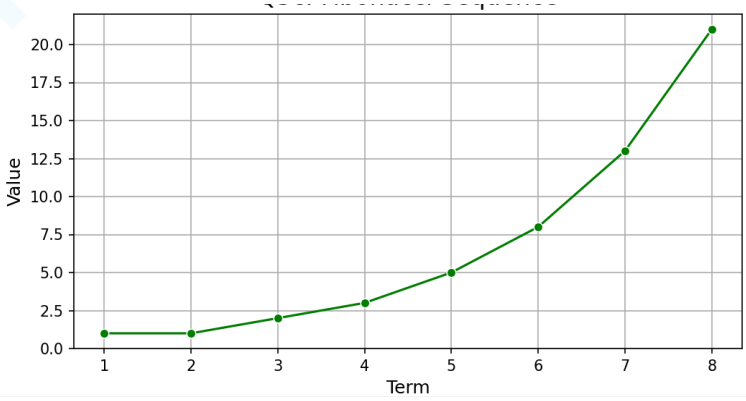
Answer:

b) 2, 4, 8, 16, __, __



Answer:

c) 1, 1, 2, 3, 5, 8, __, __(Fibonacci sequence)



Answer:

6. A train departs at 07:45 and arrives at 10:30.

a) How long is the journey?

Answer:

b) If the train makes 5 stops of equal duration, with a total stop time of 40 minutes, how long is the train moving for?

Answer:

7. Sam has £10 and buys the following items:

2 books at £3.75 each 1 pen for £1.50

a) How much does Sam spend in total?

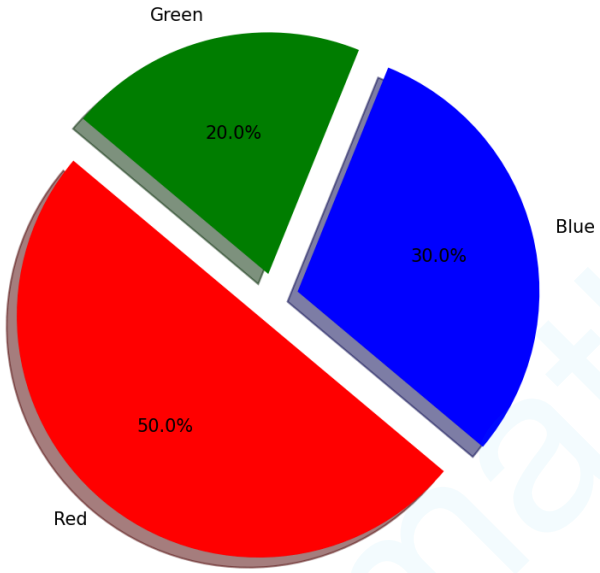
Answer:

b) How much change does Sam receive?

Answer:

8. A bag contains 5 red marbles, 3 blue marbles, and 2 green marbles.

a) What is the probability of drawing a red marble?



Answer:

b) What is the probability of not drawing a green marble?

Answer:

9. Find a number between 1 and 100 that satisfies these conditions:

a) It is divisible by both 4 and 9.

Answer:

b) It leaves a remainder of 3 when divided by 5 and is divisible by 6.

Answer:

10. a) 18 boy scouts will eat 45 loaves in 3 days. How many loaves will 6 boy scouts eat in 7 days?

Answer:

b) If 8 boy scouts eat 24 loaves in 2 days, how many boy scouts will eat 60 loaves in 5 days?

Answer:

c) How many days will it take 10 boy scouts to eat 100 loaves if each boy scout eats at the same rate?

Answer:

11. Arrange the following numbers in ascending order:

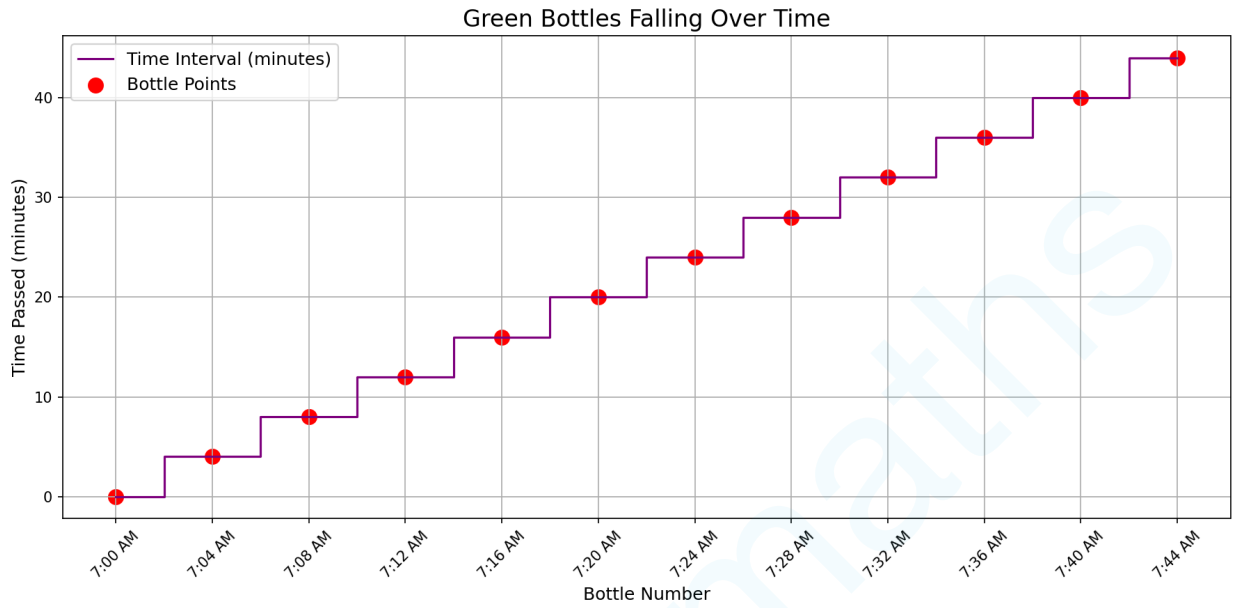
45%, $\frac{7}{10}$, 0.68, $\frac{5}{8}$, 0.75

Answer:

12. There are five unknown positive integers.

Answer:

13. If the first bottle falls at 7:00 AM and the others fall every 4 minutes, at what time will the 12th bottle fall?



Answer:

14. Here are five cards with numbers printed on them: 3, 5, 7, 9, 2

a) What is the largest possible number that can be made using all the cards, such that it is divisible by 3?

Answer:

b) Arrange the cards to form a number closest to 60,000.

Answer:

c) Using only three of the cards, what is the largest three-digit prime number?

Answer:

d) Arrange any three of the cards to give the largest possible product.

Answer:

15. a) Find a number between 0 and 100 that satisfies:

Divisible by 4, with a remainder of 1 when divided by 5.
Divisible by 7, with a remainder of 3 when divided by 9.

Answer:

b) Find a number between 0 and 100 that satisfies:
Divisible by 3 and 5, but leaves a remainder of 2 when divided by 7.

Answer:

c) Find a number between 0 and 100 that satisfies:
Remainder of 2 when divided by 3.
Remainder of 4 when divided by 5.
Remainder of 6 when divided by 7.

Answer:

16. Place the numbers from 1 to 9 inclusive in the boxes below to make the equations correct.

Answer: