



1. My father is 47 years old. I am x years old.
- How old will my father be in y years' time?
 - How old will I be in y years' time?

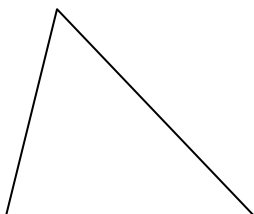
2. A garden measures p metres by $3p + 2$ metres.

- Write an expression that describes the perimeter of the garden.
- The garden has a perimeter of 76 metres. Write an equation to show this.
- Solve your equation to find the value of p .



3. Paul is x years old. His mother is 4 times his age. His sister is 6 years younger than him.

- Write two expressions which describe the ages of Paul's mother and Paul's sister.
- All three ages sum to 48. Write an equation to show this.
- Solve your equation to find out how old Paul is.
- How old was Paul's mother when Paul was born?



4. In a triangle, the largest angle is three times the size of the smallest angle and 30° larger than the other angle.
- Form an equation that shows the sum of all three angles.
 - How big is the smallest angle?
 - How big is the largest angle?

5. Sandra thinks of a number, n . She trebles it and subtracts five to get a new number. Her new number is 16.

- Form an equation to show this information.
- If Sandra had doubled her original number and added five, what would her new number have been?

6. Two rectangular plots of land have the same perimeters. The first plot measures $3p$ metres by $5p$ metres. The second plot measures $2p$ metres by $8p - 14$ metres.

- Form an equation to show this information
- What is the area of each plot of land?



7. Three consecutive numbers add to give 21.

- Form an equation to show this information.
- What are the three numbers?



8. Three consecutive even numbers add to give 24.

- Form an equation to show this information.
- What are the three numbers?

9. A rectangle has a length of k metres. The breadth is 3 metres shorter than the length. If the perimeter of the rectangle is 46m, what are the dimensions of the rectangle?

Answers

1.

- a. $47 + y$
b. $x + y$

2.

- a. $8p + 4$
b. $8p + 4 = 76$
c. $p = 9$

3.

- a. Mother: $4x$ Sister: $x - 6$
b. $6x - 6 = 48$
c. $x = 9$
d. Mother is 36 years old. 9 years ago she was 27 years old.

4.

Smallest angle = x Largest angle = $3x$ Other angle = $3x - 30$

- a. $7x - 30 = 180$
b. Smallest angle = $x = 30^\circ$
c. Largest angle = 90°

5.

- a. $3n - 5 = 16$
b. $n = 7$. So: $7 \times 2 + 5 = 19$

6.

- a. $16p = 20p - 28$
b. $p = 7$. So:
 Plot 1 = $21\text{m} \times 35\text{m}$ Plot 2 = $14\text{m} \times 42\text{m}$
 = 735m^2 = 588m^2

7.

- a. $3x + 3 = 21$
b. $x = 6$. So original numbers were 6, 7, 8.

8.

- a. $3x + 6 = 24$
b. $x = 6$. So original numbers were 6, 8, 10.

9.

Length = k Breadth = $k - 3$
 $4k - 6 = 46$
 $k = 13$

The rectangle measures 13m by 10m.