

Quadratic Applications

Word Problems

1. Two numbers differ by 6. The sum of the squares of the two numbers is 468. What are the two numbers?

12 and 18

2. A garden is fenced in to keep out wildlife. The length is 8 feet longer than the width. The area enclosed is 660 square feet. What are the dimensions of the garden?

22ft by 30ft

3. Jordon is five years older than Keith. The sum of the squares of their ages is 1753. How old are the two individuals?

Jordon is 32
Keith is 27

4. A picture to be framed is 10 cm longer than it is wide. The picture covers a surface area of ~~1344~~ 1344 cm^2 . What are the dimensions of the picture?

32cm and 42cm

5. A rectangular farmers field is 25 meters longer than it is wide. The area to be seeded is ~~5100~~ 5100 m^2 . What are the dimensions of the field?

60m and 85m

6. Karen is 11 years younger than Celine. The sum of the squares of their ages is 985. How old are the two girls?

Karen is 27
Celine is 16

7. The flooring to be laid in the newly refurbished ballroom covers an area of ~~20400~~ 20400 m^2 . The Room is 50 metres longer than it is wide. What are the dimensions of the ballroom?

120m and 170m

8. A rabbit enclosure confines the rabbit to an area of ~~4125~~ 4125 cm^2 . The width is 20 cm less than the length. What are the dimensions of the enclosure?

55cm and 75cm

9. A rare emerald dating from the Ming dynasty is on display at the local museum. It's length exceeds the width by just 4 mm. If the surface area of the emerald is ~~140~~ 140 mm^2 ; what are the dimensions of the emerald?

10mm and 14mm

10. The Yak enclosure at the local zoo encloses a space of ~~65250~~ 65250 m^2 . If the length is 65 meters more than the width, what are the dimensions?

225m and 290m