1. Prime Factor the numbers 81 and 54. Are they perfect squares?

Why or why not?

2. a) Find the area of a square given its side length is 70mm.

b) Find the side length of a square, given its area is 734 cm2

3. Calculate the areas of the three squares shown. Is the triangle a right triangle? Explain.

9cm

6 cm

?

7cm

4. What is the missing area of the square?

35cm2

11cm2

?

5. Determine the area of the square that would be attached to the hypotenuse.

27cm

27cm

6. a) Complete the table:

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Perfect square less than the number | Perfect square greater than the number | Perfect square number is closer to |
| 52 |  |  |  |
| 134 |  |  |  |

b) Estimate the square root of the number. *Then* check your answer using a calculator. √52 √134

c) Identify all of the possible whole numbers with a square root greater than 5 and less than 6.

7. Find the missing sides:

v = 27 mm

z 13cm

y= 21cm

w= 33 mm

u

x= 13cm

8. A rectangular soccer field measures 110m x 30m. Ashely walks diagonally from one corner to the other far corner. Lotte walked along the two sides of the field. What is the distance Ashely walked? What is the distance Lotte walked? Which is shorter and by how much?

9. Owen is building a birdhouse. He wants to make sure that the roof makes a right angle. He makes a mark 15cm from the corner on each wall. He measures the diagonal length to be 26cm. Do the walls of the roof form a right angle?