Pythagoras’ Worksheet 2

Pythagoras’ Theorem

“For any right-angled triangle, the square of the hypotenuse is equal to the sum of the squares of the other two sides.”

\[ a^2 + b^2 = c^2 \]

So, to find the unknown side of a right-angled triangle

We know \( a^2 + b^2 = c^2 \), so \( 5^2 + b^2 = 9^2 \)

\[ 25 + b^2 = 81 \]

\[ b^2 = 56 \]

\[ b = 7.5 \text{ (1dp)} \]

Find the unknown side of these triangles yourself:

1. \( ? \)

\[ 12 \]

\[ 7 \]

\[ ? \]

\[ 4 \]

\[ ? \]

\[ 10 \]

\[ ? \]

\[ 50 \]

\[ ? \]

\[ 30 \]
5. $\frac{a^2 + b^2}{a^2} = ___ + b^2 = ___$
   $b^2 = ___$
   $b = ___$

6. $\frac{a^2 + b^2}{a^2} = ___ + b^2 = ___$
   $b^2 = ___$
   $b = ___$

7. $\frac{a^2 + b^2}{a^2} = ___ + b^2 = ___$
   $b^2 = ___$
   $b = ___$

8. $\frac{a^2 + b^2}{a^2} = ___ + b^2 = ___$

9. $\frac{a^2 + b^2}{a^2} = ___ + b^2 = ___$

10. $\frac{a^2 + b^2}{a^2} = ___ + b^2 = ___$