Area of a Triangle

A. Choose the correct answer:

1. The formula for the area of a triangle is

    a) base × height   b) 2 × base × height

    c) $\frac{1}{2}$ × base × height   d) base + height

2. If the base of a triangle is 8 cm and height is 6 cm its area is

    a) 48 cm²   b) 24 cm²

    c) 14 cm²   d) 30 cm²

3. Which unit is used to express the area of a triangle

    a) cm   b) cm²

    c) m   d) kg

4. A triangle with base 10 m and height 4 m has an area of

    a) 40 m²   b) 14 m²

    c) 20 m²   d) 5 m²

5. A triangle's base is doubled but height remains the same the area
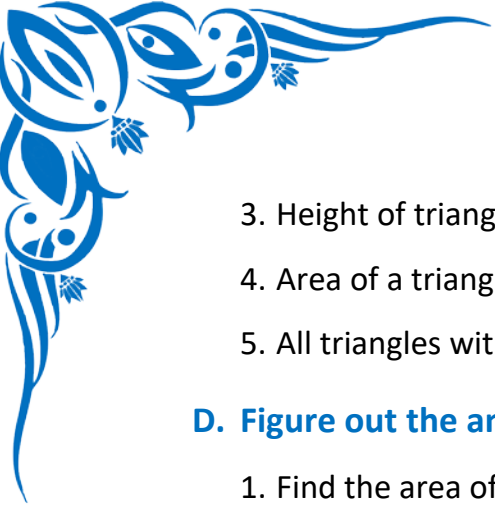
    a) becomes half   b) remains same

    c) doubles   d) becomes zero

B. Write the Missing Terms to Complete the Sentences:

1. The area of a triangle is _____ × base × height.

2. A triangle with base 12 cm and height 5 cm has area _____ cm².

3. Area is always measured in _____ units.

4. If a triangle has base 9 m and height 4 m its area is _____ m².

5. Area of a triangle increases if the _____ or the _____ increases.

C. Mark each sentence with a True (✔) or False (✗):

1. The formula for the area of a triangle is $\frac{1}{2}$ × base × height.   _____

2. A triangle with base 10 cm and height 3 cm has area 15 cm².   _____

3. Height of triangle must always be longer than the base. _____

4. Area of a triangle is measured in square units. _____

5. All triangles with the same base and height have the same area. _____

D. Figure out the answers to these questions:

1. Find the area of a triangle with base 14 cm and height 10 cm.

2. A triangular plot has base 25 m and height 12 m How much land does it cover.

3. Calculate the area of a triangle whose base is $\frac{3}{4}$ m and height is 2 m.

4. Draw a triangle and label base = 6 cm height = 4 cm then calculate area.

5. If the area of a triangle is 30 cm² and the base is 5 cm find the height.

E. Challenge yourself with these questions:

1. Find the area of a triangle whose base is 20 cm and height is 15 cm.

2. A triangle has area 36 m² and height 6 m Find the base.

3. A piece of cloth is in the shape of a triangle with base 30 cm and height 25 cm Find the area.

4. A triangular board has base ½ m and height 1 m Find the area in m².

5. If base is doubled and height is halved how does the area of triangle change.