

Name:

Date: Score:

Factoring Polynomials Word Problems

- ① The difference of 3 times a number and 2 is the same as -9 times the square of the number. Find the number.

- ② The length of a rectangle is 4 less than twice the width. If the area of the rectangle is 70 square feet, find the width of the rectangle.

- ③ The altitude of a triangle is 5 inches less than its base. The area of the triangle is 42 square inches. Find the base and altitude of the triangle.

- ④ The square of a number exceeds the number by 72. Find the number.

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Answers

- ① The difference of 3 times a number and 2 is the same as -9 times the square of the number. Find the number.

Ans: $\frac{1}{3}, -\frac{2}{3}$

- ② The length of a rectangle is 4 less than twice the width. If the area of the rectangle is 70 square feet, find the width of the rectangle.

Ans: 10 feet, 7 feet

- ③ The altitude of a triangle is 5 inches less than its base. The area of the triangle is 42 square inches. Find the base and altitude of the triangle.

Ans: 7 inches, 12 inches

- ④ The square of a number exceeds the number by 72. Find the number.

Ans: 9