

Name: _____

M\$3A Area and Perimeter Problems Sheet

- 1) The length of a rectangle is 8 inches more than its width. If the length is increased by 4 inches and the width is decreased by 1 inch, the area is unchanged. Find the dimensions of the rectangle.
- 2) The length of a rectangle exceeds 3 times the width by 1 foot. If the length is decreased by 5 feet and the width is increased by 2 feet, the area is unchanged. Find the dimensions of the rectangle.
- 3) If one side of a square is increased by 3 inches and the adjacent side is decreased by 2 inches, a rectangle is formed whose area is equal to the area of the square. Find a side of the square.
- 4) Each side of a square is increased by 3 feet. The area of the new square which is formed is 39 square feet more than the area of the original square. Find a side of the original square.
- 5) The length of a rectangular garden exceeds its width by 8 feet. If each side of the garden is increased by 2 feet, the area of the garden will be increased by 60 square feet. Find the dimensions of the original garden.
- 6) The length of a rectangle is 3 inches more than the width. The side of a square is equal to the length of the rectangle. The area of the square exceeds the area of the rectangle by 24 square inches. Find the dimensions of the rectangle.
- 7) The length of a rectangle exceeds twice its width by 2 inches. If the length is increased by 5 inches and the width is decreased by 1 inch, a new rectangle is formed whose area exceeds the area of the original rectangle by 20 square inches. Find the dimensions of the original rectangle.
- 8) A photograph is 24 cm long and 20 cm wide. When it is placed in a frame of constant width, the area of the framed photo is 300 sq. cm more than the area of the unframed photo. Find the width of the frame.
- 9) A square lawn has area 100 sq. meters. A sidewalk of uniform width surrounds the lawn. If the area of the sidewalk alone is 69 sq. meters, how wide is the sidewalk?
- 10) A picture is 12 inches by 10 inches. How wide a frame of uniform width should be placed around it so that the area of the frame is 104 square inches?
- 11) A factory machine occupies a rectangular floor space 5 feet longer than it is wide. A guard rail is installed 3 feet from the outside edge of the machine and completely surrounding it. The area of the floor space between the guard rail and the machine is 114 square feet. Find the floor dimensions of the machine.
- 12) A swimming pool is 4 times as long as it wide. A concrete walk 4 feet wide extends around the pool on all sides. The area of the walk is 864 square feet. Find the dimensions of the pool.