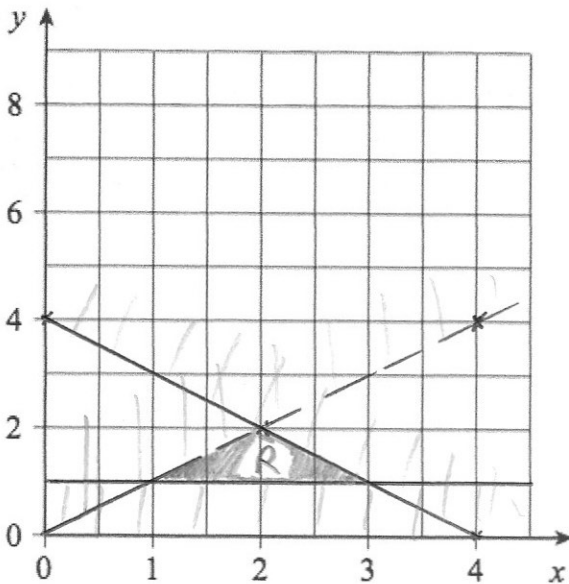


Calculate the surface area of this hemisphere.

$$2\pi r^2 + \pi r^2 = 3\pi r^2$$

$$3 \times \pi \times 7^2 = 461.8 \text{ cm}^2$$



On the grid, clearly indicate the region that satisfies all these inequalities.

$$y < x$$

$$y \geq 1$$

$$x + y \leq 4$$

Write $0.5\dot{1}\dot{2}$ as a fraction.

Give your answer in its simplest form.

$$x = 0.51212\dots$$

$$10x = 5.1212\dots$$

$$1000x = 512.1212\dots$$

$$990x = 507$$

$$x = \frac{507}{990} = \frac{169}{330}$$

A field has width x and length $2x + 1$.
The area of the field is 600m^2
Find the width and length of the field.

$$x(2x + 1) = 600$$

$$2x^2 + x - 600 = 0$$

$$a = 2 \quad x = \frac{-1 \pm \sqrt{1 - 4(2)(-600)}}{4}$$

$$b = 1 \quad x = \frac{-1 \pm \sqrt{4801}}{4}$$

$$c = -600$$

$$x = 17.07\dots \text{ or } x = -17.57\dots$$

$$\text{width} = 17.07\text{m} \text{ or } \text{length} = 35.14\text{m}$$