When you walk into a darkened room, the pupils of your eyes expand in size. In fact, the light
gathering power of each of your eyes is proportional to the area of its pupil. Let's say that you walk
into a darkened room and the radius of each of your pupils increases by 35%. By what percentage did
the light gathering power of each eye increase? Assume that your pupils are circles so that you can use
the area formula: \[ A = \pi \times (\text{radius})^2 \]

Don't forget, to receive credit you need to give me a correct answer and tell me how you
calculated it! Good Luck!