

IE-341

Second Semester 1445H (Spring-2024) – 3(2,1,2)  
“HUMAN FACTORS ENGINEERING”

Sunday, April 21<sup>st</sup>, 2024 (12/10/1445H)

Exercise Set 3: Visual Angle - Acuity

Name:	Student Number: 4	Section: 9 AM
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**Answer ALL of the following questions**

1. What minimum visual angle can a person with 20/30 acuity resolve?
  - A. 0.5 arc-minute
  - B. 1.0 arc-minute
  - C. 1.5 arc-minute
  - D. 2.0 arc-minute
2. The visual angle subtended by an 8-inch wide light bulb, viewed from 200 feet is ...
  - A. 1.0 arc-minute
  - B. 6.7 arc-minute
  - C. 11.46 arc-minute
  - D. 30 arc-minute
3. A person who can resolve a minimum visual angle of 0.8 arc minutes has a visual acuity of:
  - A. 20/20
  - B. 20/16
  - C. 20/25
  - D. 20/0.8

4. A 1-inch wide target is just identifiable to an observer with 20/20 visual acuity. The target is how far away from the observer's eyes?
  - A. 4.8 feet
  - B. 63.9 feet
  - C. 286.5 feet
  - D. 3438 feet
  
5. A worker's job is to detect a 0.01 inch space between two wires on an electronic component. One day the worker forgets his glasses (he has 20/50 uncorrected vision). What is the farthest distance away the worker can be and still see the space between the wires?