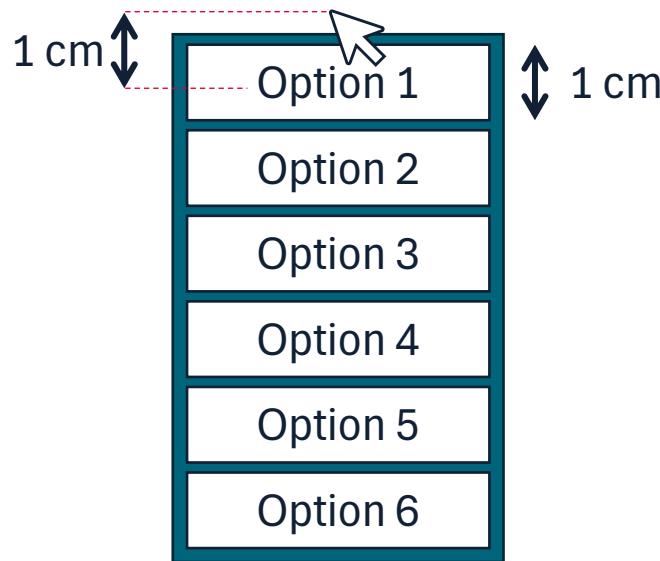
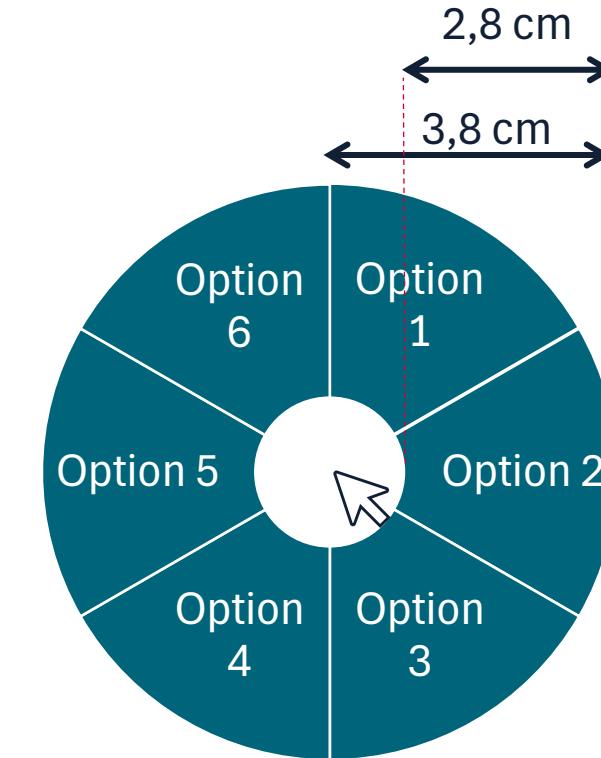


# Fitt's Law: Applications

- Which will be **faster** on average?



$$Average\ ID = \frac{\sum_{i=1}^6 \log_2 \left( \frac{i}{1} + 1 \right)}{6} \approx 2,04$$



$$Average\ ID = \log_2 \left( \frac{2,4}{2,8} + 1 \right) \approx 0,89$$

# Fitt's Law: Applications

The screenshot shows a mobile application interface for a course titled "Corso di Studi in Informatica". The top navigation bar includes icons for battery, signal, and time (10:13). The main content area is divided into sections:

- III ANNO**:
  - Insegnamento**: Reti e Programmazione Distribuita, Ingegneria del Software, Tecniche di Programmazione Avanzata.
  - Copia, Cerca, Seleziona tutto, ...
  - Tecnologie Web** (highlighted with a blue circle)
  - Esame a Scelta (si veda Tabella Esami a Scelta)
  - Tirocinio + Altre attività di Orientamento
  - Prova Finale
- ESAMI A SCELTA LIBERA**:
  - Insegnamento**

The screenshot shows a Microsoft PowerPoint slide titled "FITT'S LAW - MOVEMENT TIMES". The slide content includes:

- Movement Times (MT) depend on the Difficulty Index ID
- $$MT = a + b \cdot ID = a + b \cdot \log_2 \left( \frac{A}{W} + 1 \right)$$
- Movement times also:
  - Can be fitted to specific data
  - It is the equation of a straight line
  - MT increases linearly with the ID

The slide has a red border and is numbered 36 at the bottom. The status bar at the bottom of the screen shows "Slide 36 of 40", "English (United Kingdom)", "Accessibility: Investigate", and "46%".

# Fitt's Law: Applications



Shadow of the Tomb Raider  
(videogame)

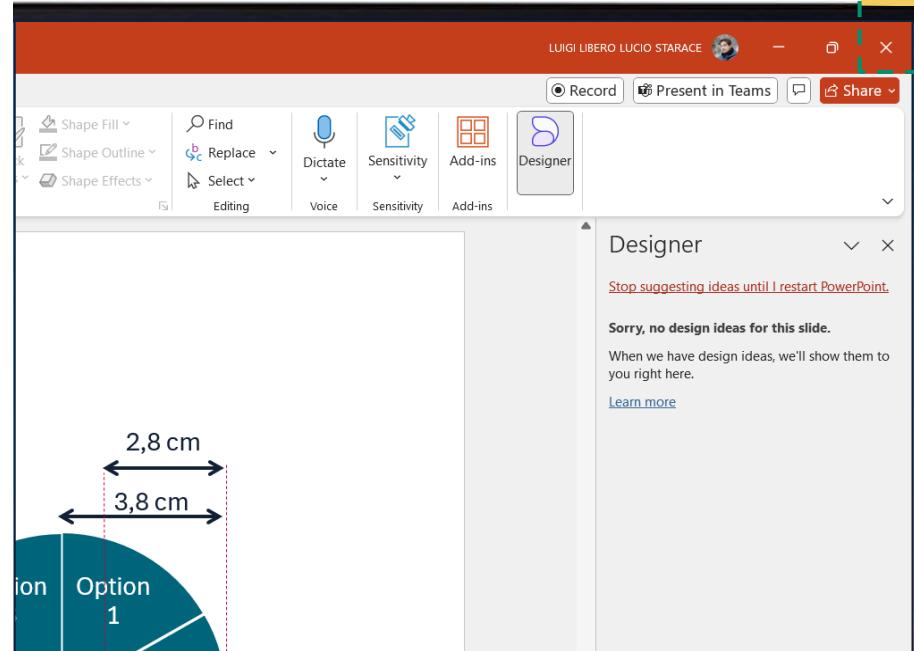


Grand Theft Auto: San Andreas – The Definitive Edition  
(videogame)

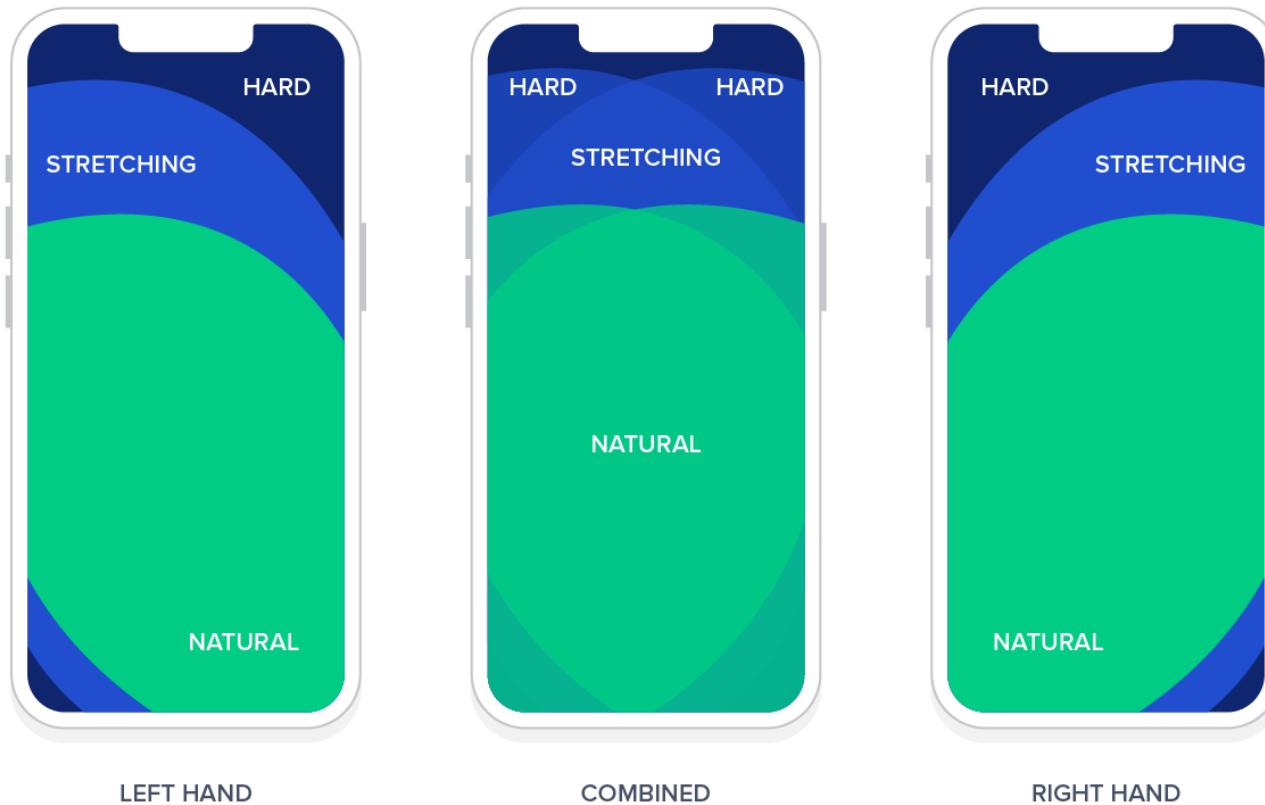
# Fitt's Law: Infinite Widths

- With a pointing device, targets near the edges have an infinite width
- These targets are fairly easy to hit, as  $ID = \log_2(\frac{A}{\infty} + 1) = 0!$

Theoretical Effective Target Size



# Fitt's Law: Mobile Devices



<https://www.toptal.com/designers/mobile-ui/fitts-law-user-interface-design>



# Readings and references

- Buxton, W. (1990). A Three-State Model of Graphical Input. In D. Diaper et al. (Eds), Human-Computer Interaction - INTERACT '90. Amsterdam: Elsevier Science Publishers B.V. (North-Holland), 449-456.  
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- MacKenzie, I. S. (2003). Motor behaviour models for human-computer interaction. In *HCI models, theories, and frameworks: Toward a multidisciplinary science*  
[https://www.yorku.ca/mack/mackenzie\\_chapter.html](https://www.yorku.ca/mack/mackenzie_chapter.html)