INCOSE Healthcare Working Group Workshop
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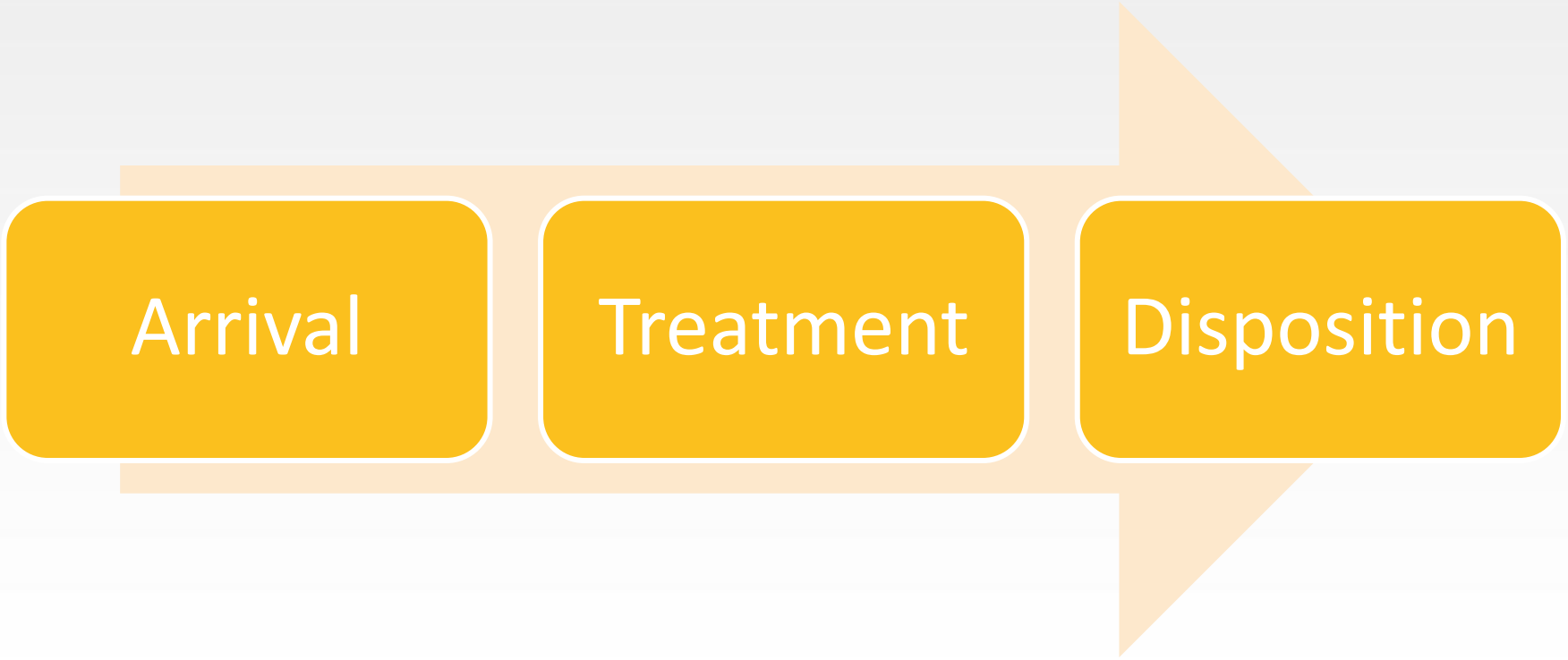
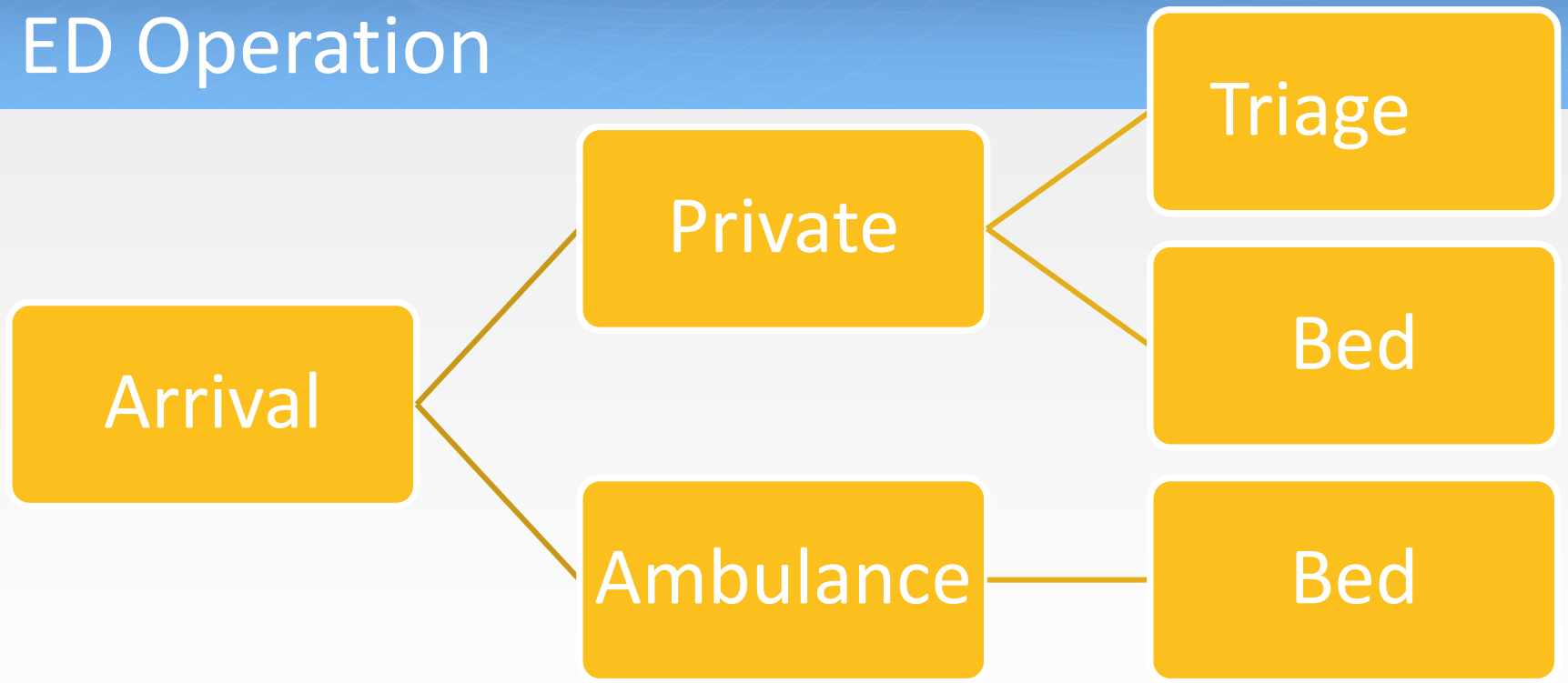
Overview

- How does the ED operate?
- How does the ED interact with other hospital services?
- What are the key metrics for ED operations?
- What are the key bottlenecks hindering ED operations?

ED Operations



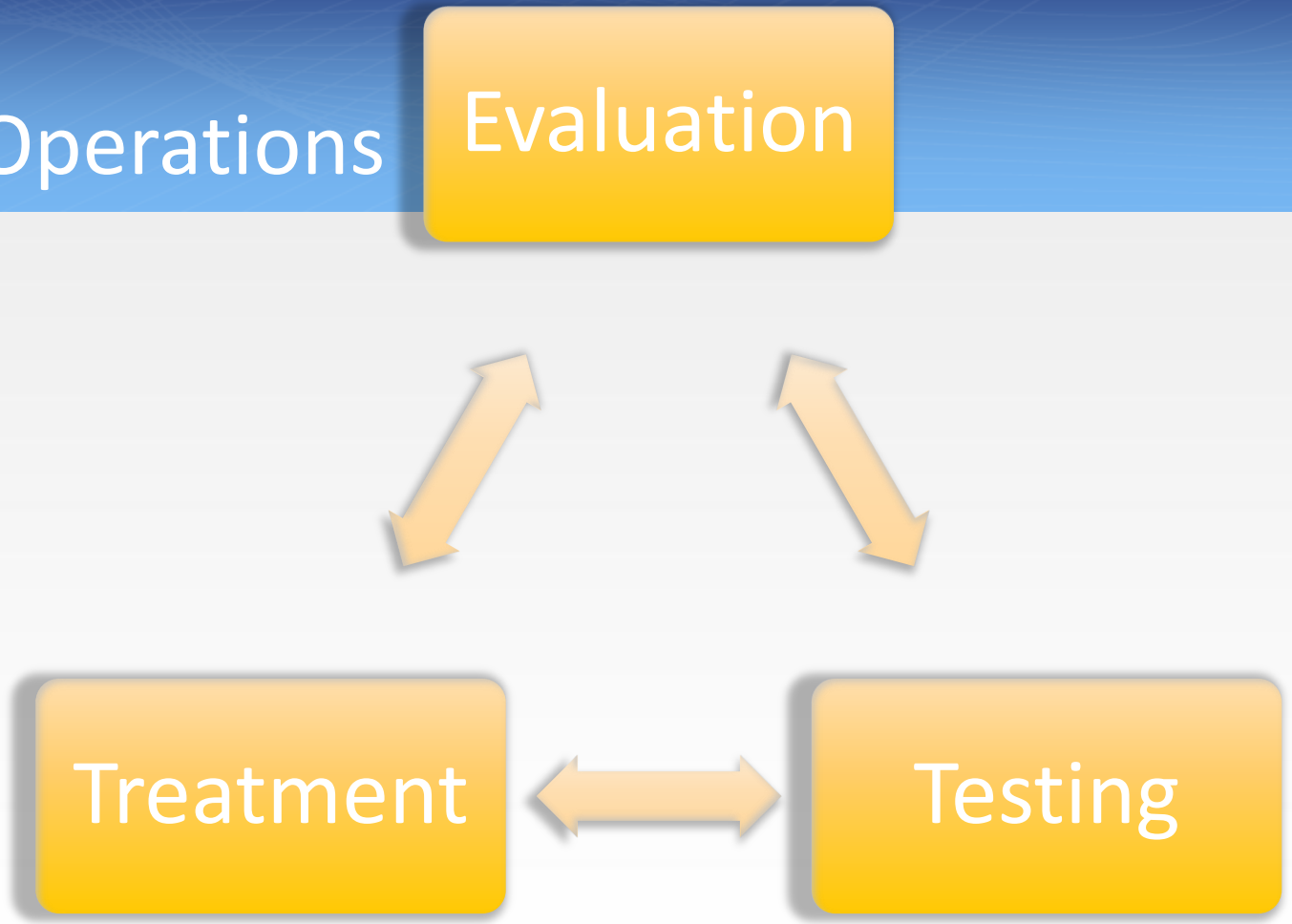
ED Operation



ED Operations

- Triage system
  - Quick evaluation and prioritization of patient based on acuity - using chief complaint, symptoms, and vital signs
  - Triage RN or bedside RN
- Treatment team assignment
  - Primary RN
  - ER Physician

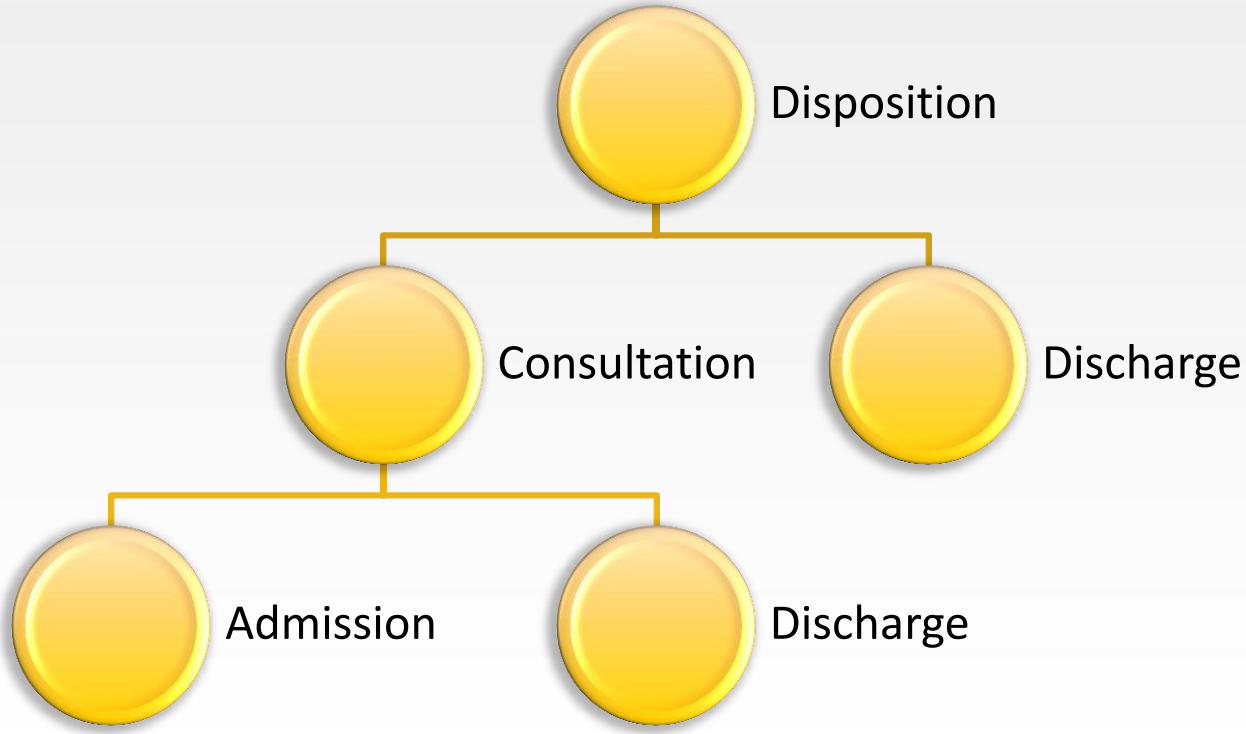
ED Operations



ED Operations

- Evaluation
  - ER history and exam
  - Scan chart
- Testing
  - Labs, x-rays, ct scans, ekg…
- Treatment
  - IV fluids, analgesia, antibiotics…

ED Operations



ED/Hospital Interactions

Ancillary	Physicians	Admin/RN
• **Laboratory** • **Radiology** • EVS	• Hospitalist • General Surgery • Orthopedics • Pediatrics • Other…	• Unit charge nurse • Bed nurse • House supervisor

Key ED Operations Metrics

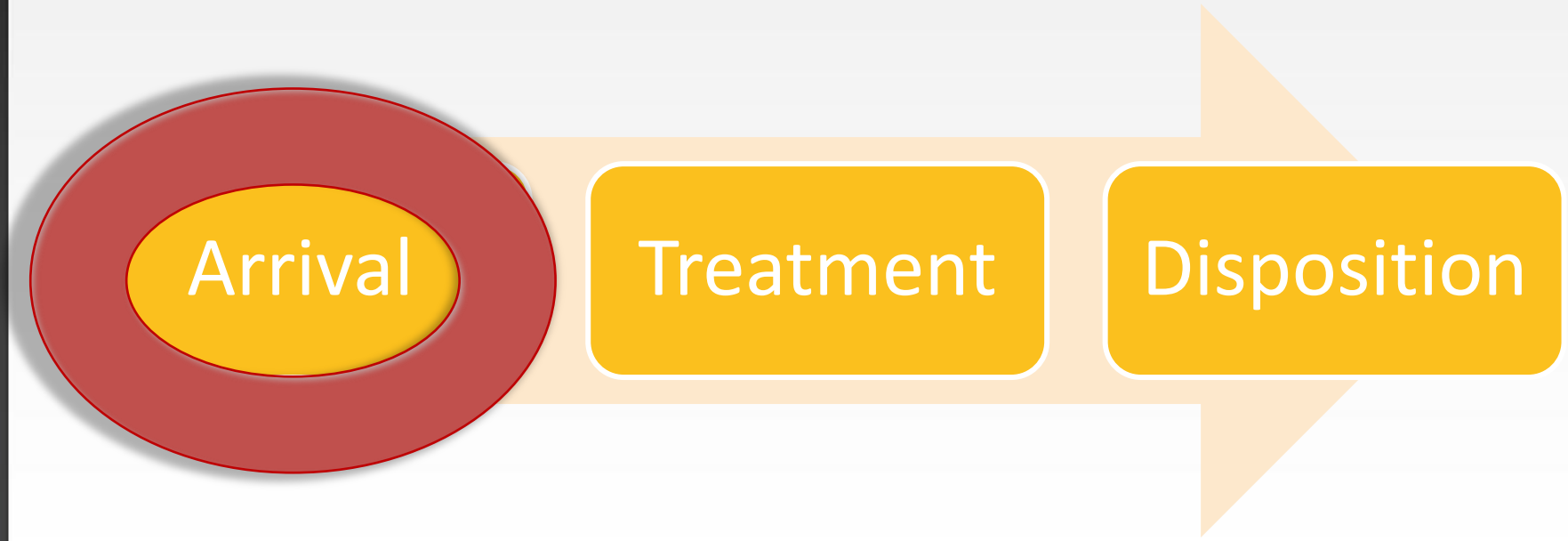
- Patient arrival to room time
- Patient arrival to physician time
- ED LOS for non-admitted patients
- Disposition home to RN Discharge
- Door to decision to admit
- Admit order to ED Depart
- Patient % LWBS
- ASQ – overall satisfaction
- ASQ – consistent messaging

ED operations bottlenecks

- Arrival – volume impaction
- **Treatment –**
  - **lab delays (order, draw, send, follow up)**
  - **imaging delays (order, radiology notify, radiology availability)**
  - **RN/MD communication delays (med administrations, reassessment, change in condition)**
- Disposition –
  - Consultation (delay in call back, arrival, disposition)
  - Admission delays (hospital impaction, no staffing, available bed delays)
  - Discharge planning, hospital impaction, delay in transfer to inpatient

Case Scenario

- 40 year old male, abdominal pain (08:00)

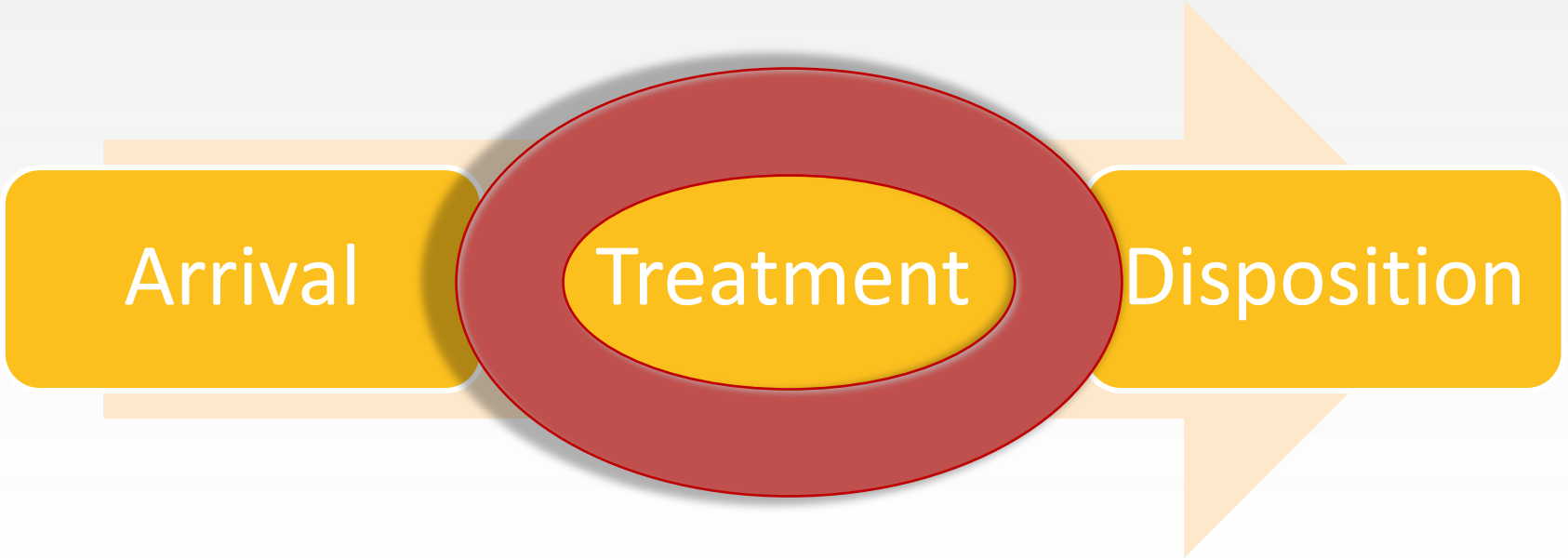


Case scenario

- Triage (08:05)
  - RLQ abd pain and vomiting for one day
  - Vitals – 120/70; 85; 98.7; 16, 99% (all normal)
  - Pain score – 6
  - Acuity level – 3
- Treatment Bed vs. Waiting Room (09:30)

Case Scenario

- 40 year old male, abdominal pain



Case scenario

MD	RN
Assessment (09:45)	Assessment(9:55)
Order IV , labs, med (10:00)	Start IV (10:00)
Reassess patient (11:45)	Send labs (10:15)
Order CT scan (11:45)	Reassess patient – call lab (10:40)
Call RN to start contrast (12:15)	Oral contrast for CT scan (12:20)
	Call CT tech 15:00

Case Scenario

- 40 year old male, abdominal pain

Case scenario

- CT scan shows + for appendicitis (16:00)
- General Surgeon paged (16:05)
- General surgeon calls back (in OR) – (16:20)
- Surgeon consult arrives and sees patients (18:00)
- Admit order placed (18:30)
- Patient transferred out of ED to hospital bed 234. (20:00)

QUESTIONS???