# FORENSICS B

FINAL EXAM REVIEW

## WHICH FORENSIC SPECIALISTS WOULD DO THE FOLLOWING?

- A. EXAMINE BONES
- **B. EXAMINE INSECTS**
- C. RUN TESTS FOR DNA ANALYSIS
- D. RUN TISSUE TESTS FOR DRUG IDENTIFICATION
- E. MAKE A CLAY FACE FROM A SKULL

## WHICH FORENSIC <u>UNIT</u> WOULD HANDLE THE FOLLOWING?

- A. TESTING BULLETS AND GUNS
- B. TESTING TO SEE IF SOMEONE WAS POISONED
- C. EXAMINE ARCHES, LOOPS AND WHORLS
- D. PROCESSING FILM AND DIGITAL IMAGES



A. WHAT ARE THE NAMES OF THE BLOOD TYPES?

B. WHAT DOES IT MEAN TO BE + OR -?

C. WHAT GENOTYPES CAN EACH PERSON WITH A CERTAIN BLOOD TYPE HAVE?



• A. WHAT BLOOD TYPE IS THE UNIVERSAL DONOR? WHY?

B. WHAT BLOOD TYPE IS THE UNIVERSAL ACCEPTOR? WHY?

(\*MAKE SURE YOU KNOW THE DIFFERENCE BETWEEN ANTIGENS AND OANTIBODIES!)

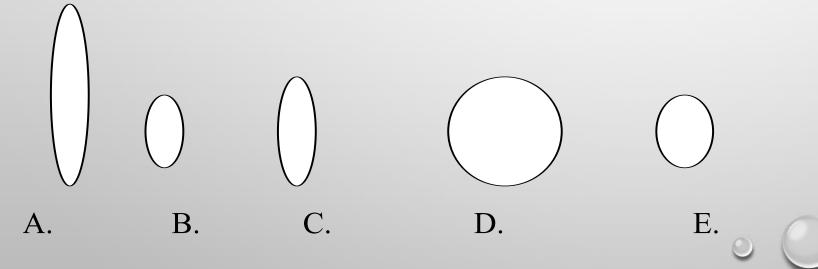


A. A PERSON WITH TYPE A+ BLOOD IS INJURED IN AN ACCIDENT. WHAT BLOOD TYPES CAN BE GIVEN TO THEM? REMEMBER TO INCLUDE THE + OR – IN YOUR ANSWER!

B. A PERSON WITH AB- BLOOD IS INJURED IN AN ACCIDENT. WHAT BLOOD TYPES CAN BE GIVEN TO THEM? REMEMBER TO INCLUDE THE + OR – IN YOUR ANSWER!



EXAMINE THE BLOOD SPATTER BELOW. FOR NUMBERS 27--31 PUT THESE DROP PATTERNS IN ORDER FROM THE SMALLEST ANGLE OF IMPACT TO THE LARGEST ANGLE. SO.... i.e. if B is the smallest, it is answer 27. Then move on to the next largest and that is the answer for 28 etc



- A. WHAT TEST IS RUN ON A SMALL SAMPLE TO DETERMINE IF IT IS REAL BLOOD?
- B. WHAT WOULD INDICATE A POSITIVE RESULT?

- C. WHAT TEST WOULD BE DONE ON A LARGE AREA WHERE YOU SUSPECT A CRIME HAS BEEN COMMITTED?
- D. WHAT WOULD INDICATE A POSITIVE RESULT?



•LIST AT LEAST 5 VARIABLES THAT

CAN AFFECT THE SPATTER PATTERN

OF BLOOD



• WHICH SPATTER PATTERN IS THIS?

• WHAT CAUSES IT?



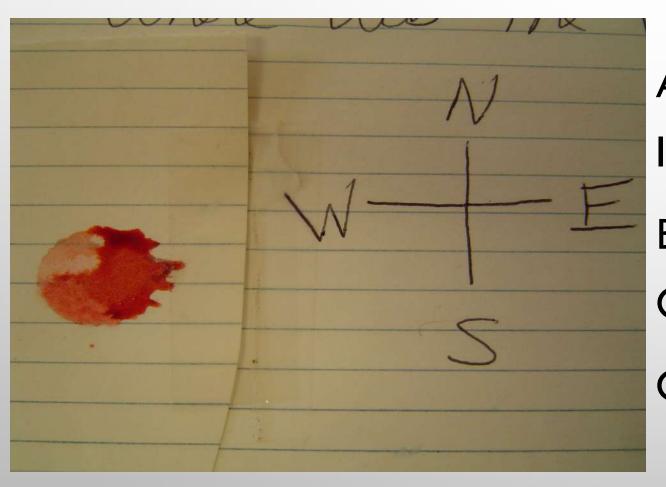


A. WHAT SPATTER PATTERN IS THIS?

B. WHAT REAL LIFE EVENTS
WOULD CAUSE THIS PATTERN AT
A CRIME SCENE?







A. WHAT SPATTER PATTERN IS THIS?

B. WHICH WAY ARE THEY GOING?

C. HOW DO YOU KNOW?





A.WHAT SPATTER

PATTERN IS THIS?

B. WHERE IS THE VICTIM?



A. WHAT ARE THE PARTS OF A DNA MOLECULE?

B. WHAT MAKES UP THE SIDES OF THE DNA LADDER?

C. WHICH NITROGEN BASES PAIR TOGETHER?

D. HOW MANY HYDROGEN BONDS ARE BETWEEN THE BASES?



#### DNA EXTRACTION IS THE FIRST STEP IN DNA ANALYSIS -

- A. WHERE CAN YOU GET DNA FROM?
- B. HOW DO YOU DO DNA EXTRACTION? REAGENTS?
- **MACHINES?**
- C. WHAT DOES THE DNA LOOK LIKE?



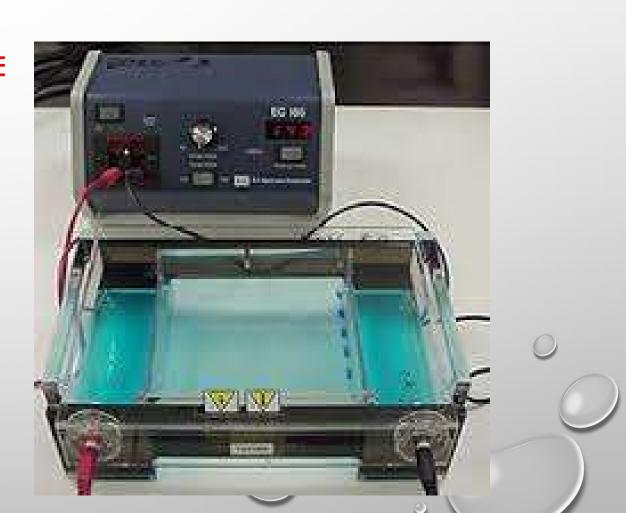
POLYMERASE CHAIN REACTION (PCR) IS USED TO REPLICATE THE DNA

- A. WHY DO WE NEED COPIES OF THE DNA?
- B. WHAT NEEDS TO GO IN THE TEST TUBE IN ORDER TO MAKE MORE DNA?
- C. WHAT MACHINE IN THE LAB IS USED TO REPLICATE DNA?

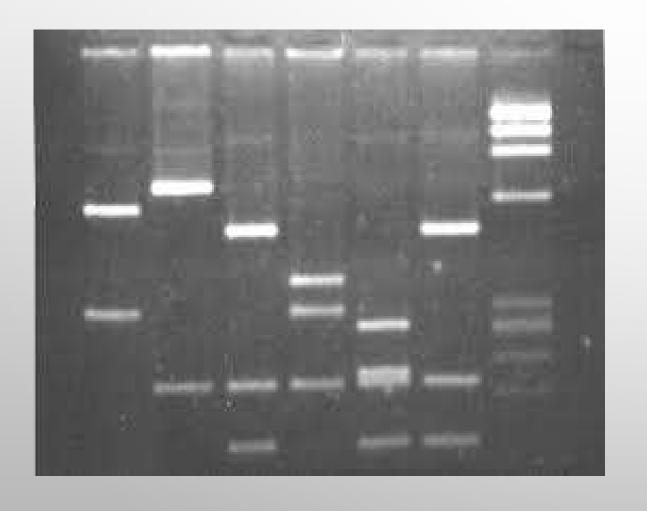


#### GEL ELECTROPHORESIS MAKES THE DNA VISIBLE

• WHAT ARE THESE THINGS? CAN YOU NAME THE EQUIPMENT NEEDED?



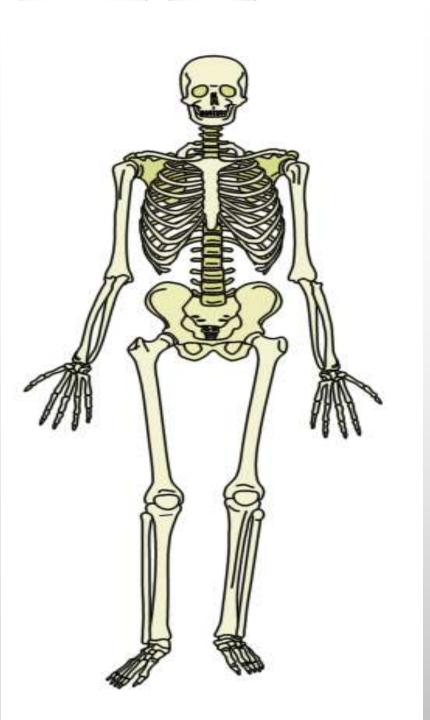




- A. ARE ANY OF THESE A MATCH?
- B. WHICH FRAGMENT IN THE GEL IS THE LARGEST?
- C. WHICH ARE THE SMALLEST?



- A. LIST SEVERAL THINGS THEY CAN FIND OUT BY LOOKING AT BONES
- B. LIST SEVERAL TOOLS THEY WOULD NEED IN THE FIELD AND IN THE LAB
- C. WHY IS METRIC DATA MORE USEFUL THAN NON-METRIC DATA?



A. CAN YOU IDENTIFY THE MAJOR BONES OF THE BODY?

B. HOW MANY BONES DOES A CHILD HAVE? AN ADULT?



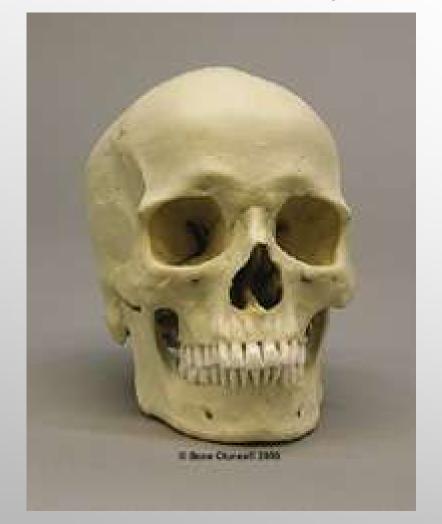


A.NAME THE PARTS OF THE PELVIS

B. IS THIS MALE OR
FEMALE? HOW DO YOU
KNOW?



#### **WHAT RACE?** LIST DIFFERENCES DUE TO RACE





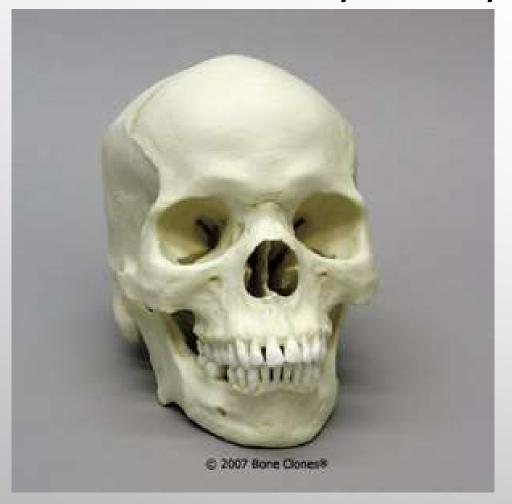
Gender differences – list all the characteristics that could help you

identify gender

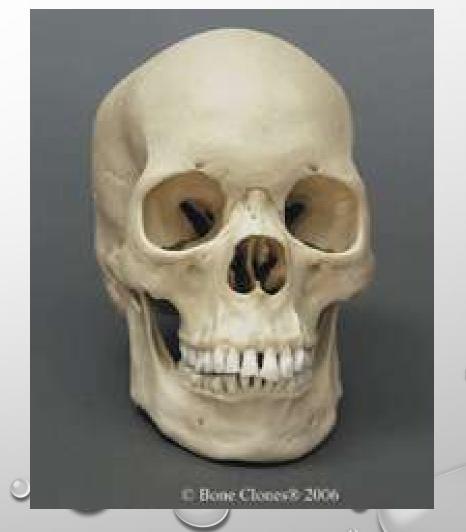




Look carefully – can you determine the race of these



skulls?





A. WHAT BONES CAN BE USED TO DETERMINE THE HEIGHT OF THE VICTIM?

B. WHAT DO YOU MEASURE?

# ANTHRO YOUNG VS. OLD – WHAT UP?





### ENTOMOLOGY

•WE JUST TOOK THE TEST SO I DIDN'T DO SLIDES FOR THIS.

•LOOK OVER YOUR TEST — BE ABLE TO CALCULATE PMI IN CASES!

# GOOD LUCK!!!! ©