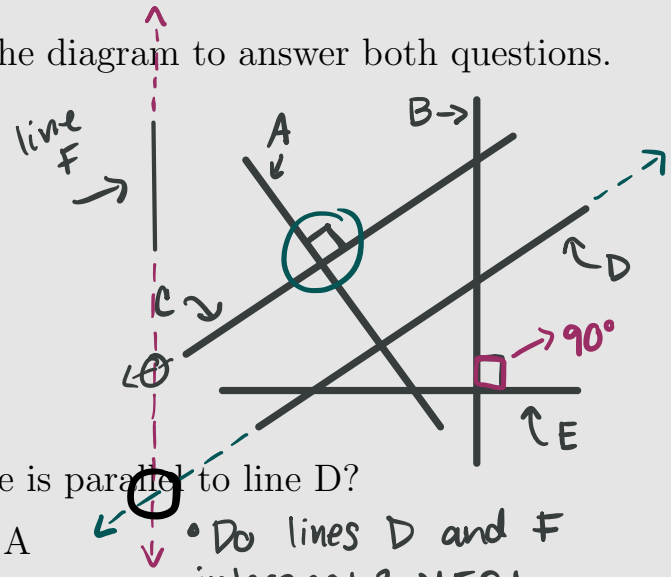
Topics to review:

- Parallel and perpendicular lines

Problem

Refer to the diagram to answer both questions.



• line A is a traversal

Which line is parallel to line D?

(A) Line A
(B) Line B
(C) Line C
(D) Line E
(E) Line F ?

• Do lines D and F intersect? YES!
• They are not parallel (F and D)
• F and B are!

Which line is perpendicular to line D? B?

(A) Line A
(B) Line B
(C) Line C
(D) Line E

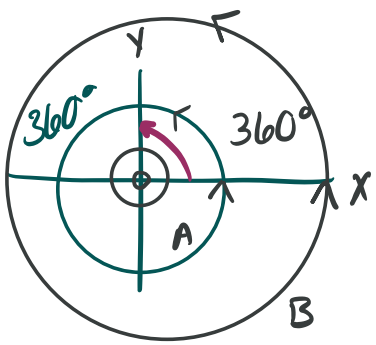
• They do touch! (Intersect at some point)
• "lines B and D are not perpendicular bc they do not create a 90° angle at their intersection"
• Line B and E!

Parallel lines

- Need 2 lines to decide if they are parallel (pair)
  - Comparison
- They never intersect
  - Do not touch, cross paths, overlap, etc.
- Train tracks
  - side by side

- lines are abstract objects
- We can extend any line in either direction infinitely

* "Extend infinitely w/out ever touching"? *



- Full circle → 360°
- Half circle → 180°
- 1/4 of a circle → $\frac{360^\circ}{4} = 90^\circ$

$\frac{1}{4} \cdot 360 = \frac{1 \cdot 360}{4} = \frac{360}{4}$

$0.25 \cdot 360$

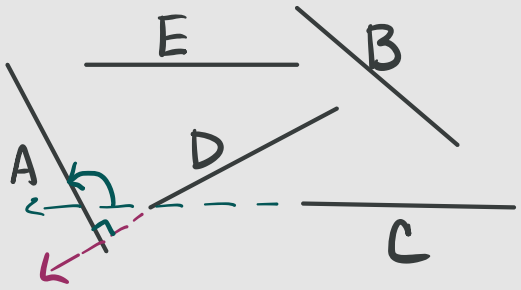
$\frac{1}{4} \cdot \frac{360}{1} = \frac{360}{4}$

- Multiplying fractions & whole numbers

$\frac{1}{4} \cdot 360$

Problem 2

Refer to the diagram to answer both questions. Note that the end points of a line can be extended infinitely in opposite directions.



Which line is perpendicular to line A? D

- intersect, 90°

(A) Line B

~~(B) Line C~~

(C) Line D

(D) Line E

Which line is parallel to line C?

(A) Line A

(B) Line B

(C) Line D

(D) Line E

Topics to review:

- Angles, parallel lines, and traversals
- Missing angles with a traversal

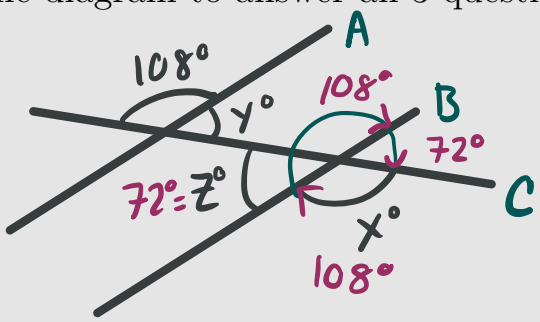
• Acute $< 90°$

• Obtuse $> 90°$

Problem

Refer to the diagram to answer all 3 questions.

lines A and B are parallel



$180° = 108° + y°$

$180° - 108° = y°$

$72° = y°$

What is the measure of angle **x**? 108°

~~(A)~~ 180°

~~(B)~~ 90°

(C) 108°

~~(D)~~ 72°

• x is an obtuse angle

$x° > 90°$

What is the measure of angle **y**?

(A) 180°

(B) 90°

(C) 108°

(D) 72°

$y° = 180° - 108° = 72°$

What is the measure of angle **z**?

(A) 180°

(B) 90°

(C) 108°

(D) 72°

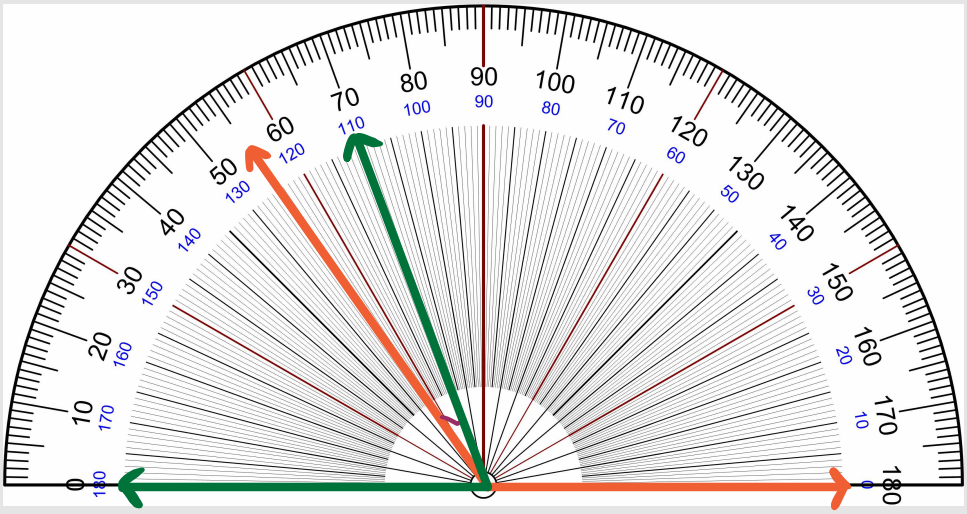
$z° = y° = 72°$

Topics to review:

- Using a protractor to measure angles

Problem

Refer to the image when answering the questions.



What is the measure of the **orange angle**?

~~(A)~~ 55°

(B) 145°

~~(C)~~ 65°

(D) 125°

What is the measure of the **green angle**? 110°, 70°

(A) 180°

(B) 70°

(C) 95°

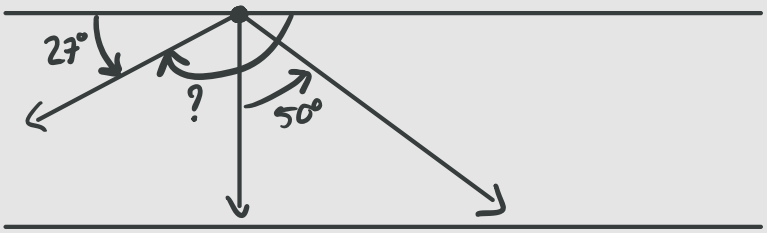
(D) 110°

Topics to review:

- Solving for unknown angles

Problem

Refer to the diagram to answer question (1).



What is the measure of the unknown angle?

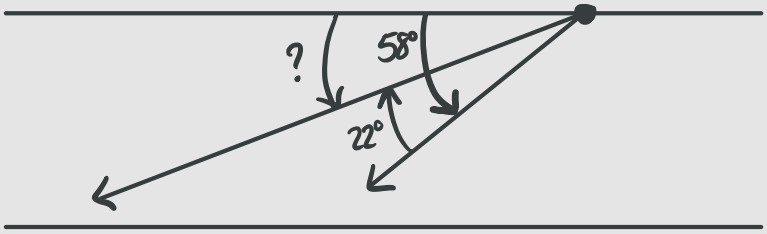
(A) 177°

(B) 66°

(C) 95°

(D) 153°

Refer to the diagram to answer question (2).



What is the measure of the unknown angle?

(A) 100°

(B) 22°

(C) 45°

(D) 36°