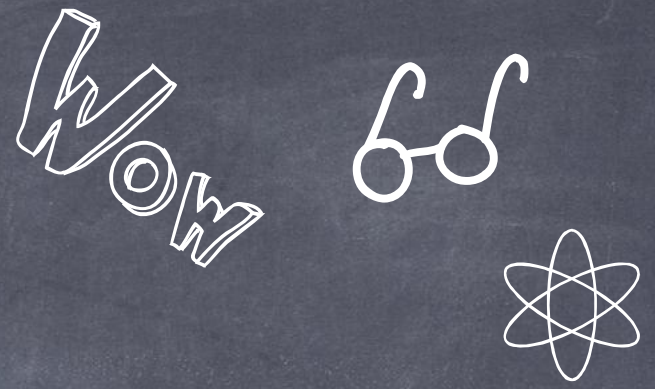
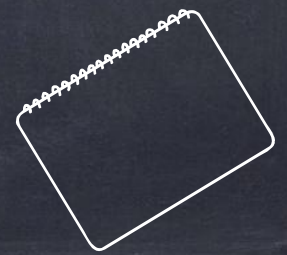
Singapore Math L4

Unit 6 ANGLES & Unit 7 PERPENDICULAR AND PARALLEL LINES

Instructor： Franky Chan





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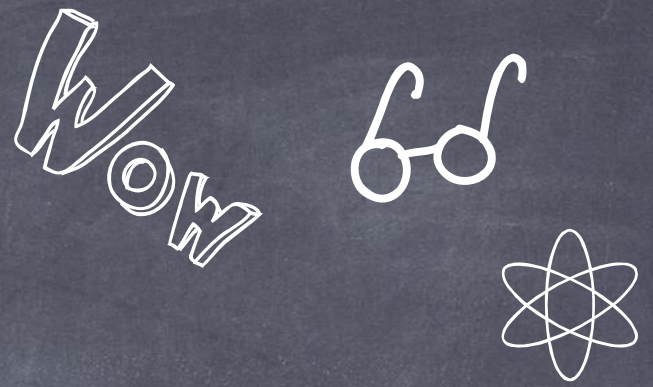
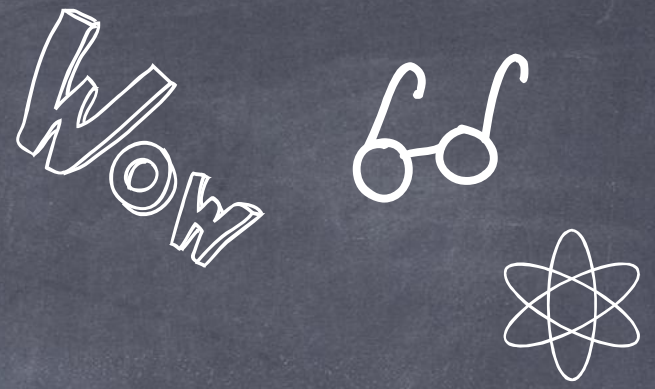


01

Introduction

Instructor's Self-introduction



01.Introduction

Instructor's Self-introduction

* Name: Franky Chan
* Background:
  - High School: 2019-2022, BBA, Jiangsu Province
  - Undergraduate: 2022-present , CUHK-sz, DSBDT
* Contact:
  - Phone/WeChat: 13338782251
  - Tencent QQ: 1290384324
  - Email: 122090019@link.cuhk.edu.cn

Meeting number: # We Meet： 531-152-830

About This Course:

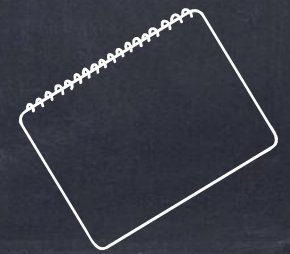
* Go over what we have learnt
* Weekly check the homework
* Find interest through learning
* Expand our thinking mode
* Relection and improvement

NO EXTRA TUTORIALS!
Don't hesitate to contact me if necessary at any time!

02

Review

Go Over The Knowledge



02.Review

Go Over The Knowledge

LEARNING TARGET

ANGLES	*name angles. *measure and draw angles in degrees with the use of a protractor.	LINES	*draw and identify perpendicular and parallel lines.
Unit 6	*relate a turn with degrees up to 360º. *understand 8-point compass.	Unit 7	*identify vertical and horizontal lines.

02.Review: ANGLES

Go Over The Knowledge

1) How to name an angle?

Acute Angle?

Right Angle?

Obtuse Angle?

Straight Angle?

Reflex Angle?

... ... So what's the difference?

02.Review:ANGLES

Go Over The Knowledge

2) How to measure an angle?

Acute / Right / Obtuse Angle?

Straight / Reflex Angle? Still... ...

... ... So what's the difference?

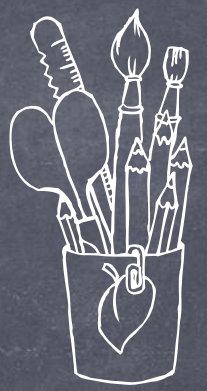
a) Tool?

PROTRACTOR

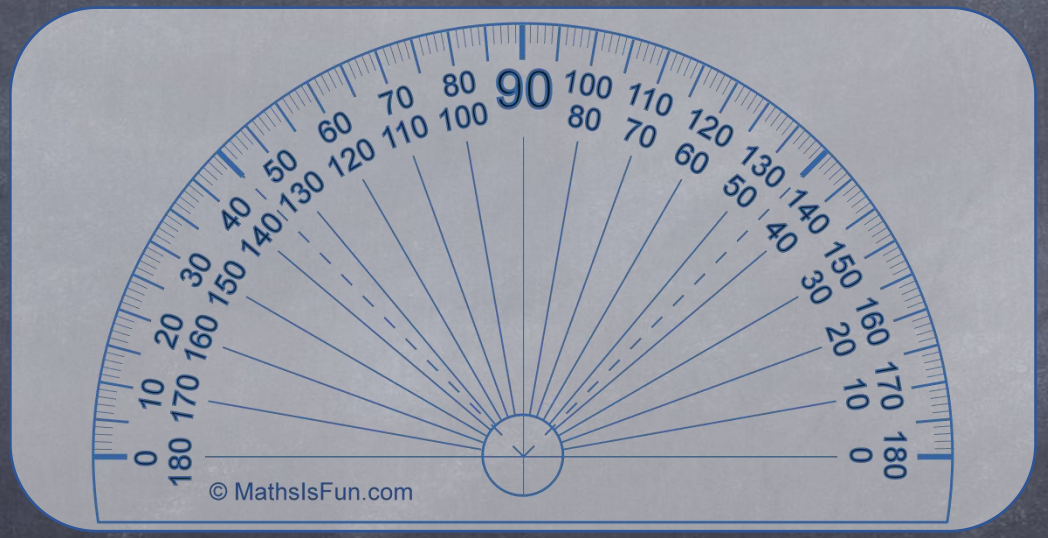
b) HOW TO USE?

02.Review: ANGLES

Go Over The Knowledge



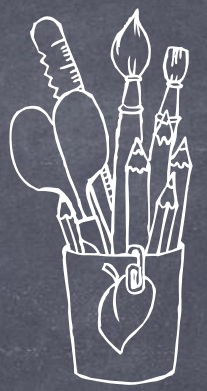
2) How to use a protractor?



Reference:https://www.mathsisfun.com/geometry/protractor-using.html

02.Review: ANGLES

Go Over The Knowledge



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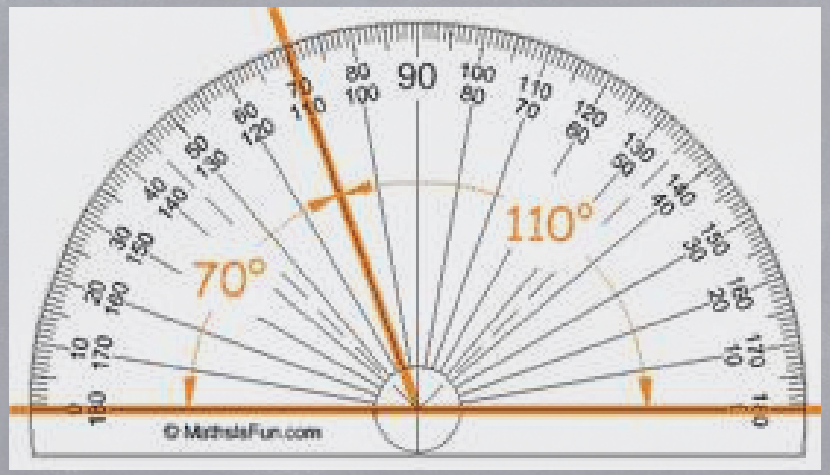

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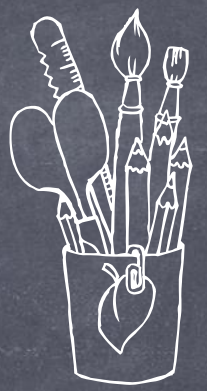
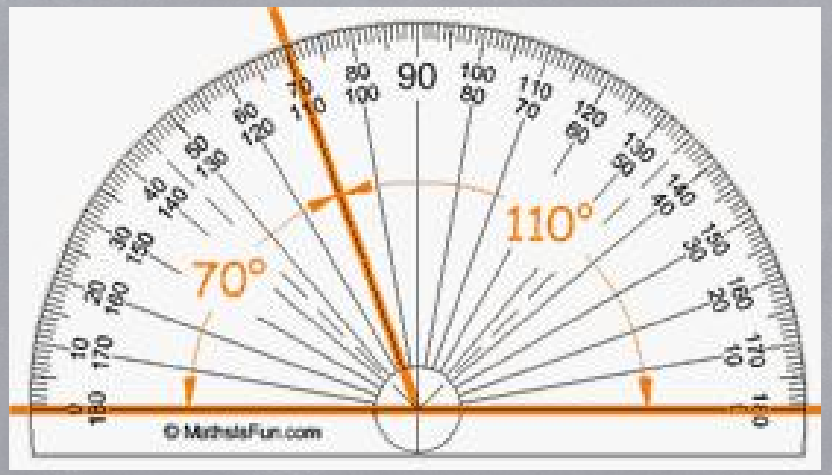
02.Review: ANGLES

Go Over The Knowledge



2) How to use a protractor?

a particular angle?



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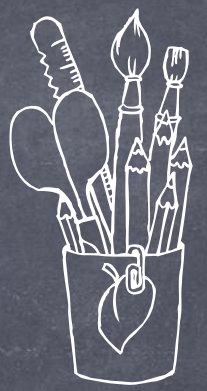
02.Review: ANGLES

Go Over The Knowledge



3) 360 degrees or 360°?

Acute Angle?

Right Angle? * 90°

Obtuse Angle?

Straight Angle? * 180°

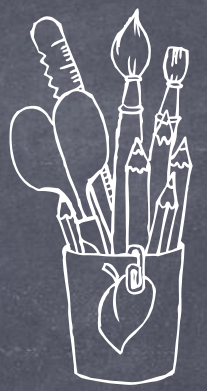
Reflex Angle?

... ... So what's the relationship?

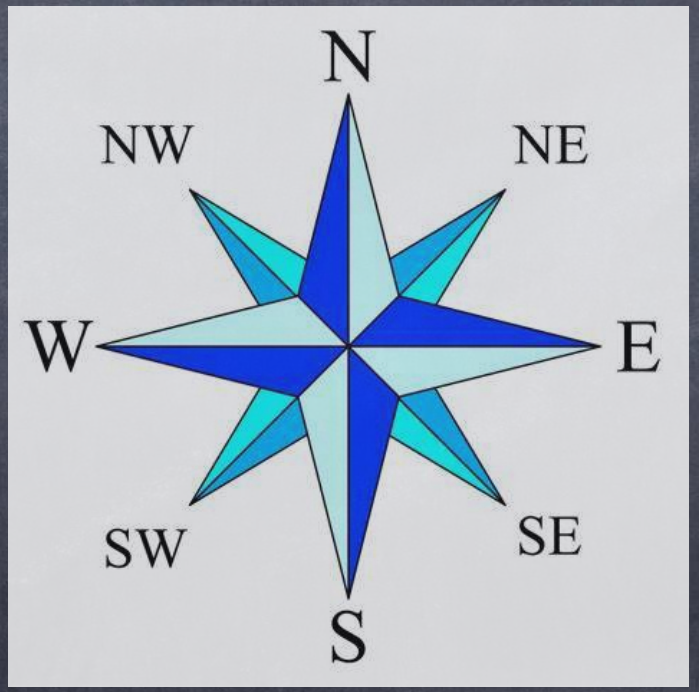
Name and definition?

02.Review: ANGLES

Go Over The Knowledge



4) 8-point compass?



02.Review: LINES

Go Over The Knowledge

1) What is a line?

(only 2 - dimention lines discussed)

In common language it is a long thin mark made by a pen, pencil, etc.

In Geometry a line:

- is straight (no bends),
- has no thickness,
- and extends in both directions without end (infinitely).

02.Review: LINES

Go Over The Knowledge

1) What is the relationship between two lines?

(only 2 - dimension lines discussed)

a) intersecting (perpendicular lines included)/ crosswire

* VERTICAL: Specialized intersecting

b) parellel

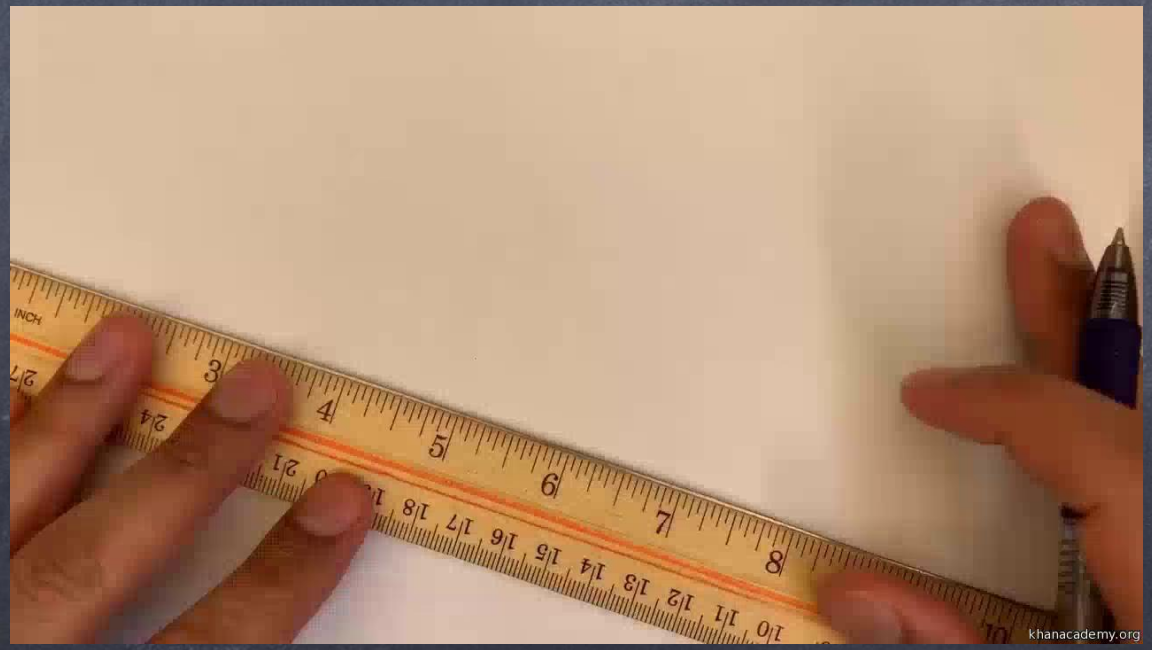
* opposite side of intersecting lines

02.Review: LINES

Go Over The Knowledge

2) How to graph?

(only 2 - dimension lines discussed)

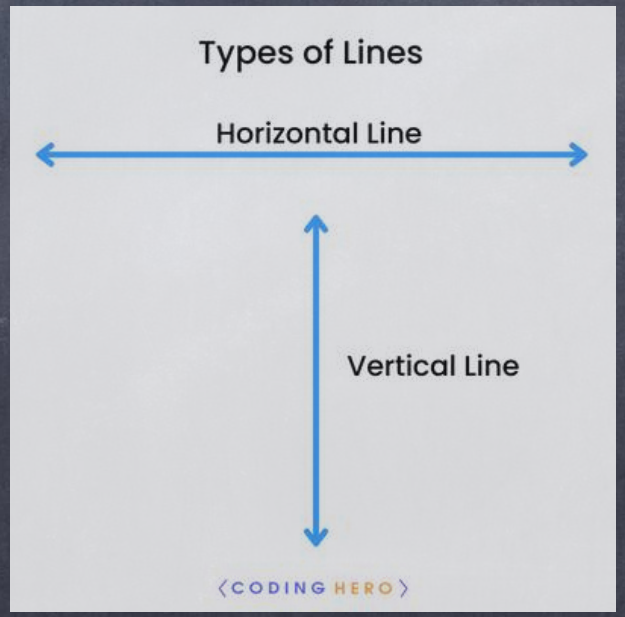


02.Review: LINES

Go Over The Knowledge

3) Horizontal? or vertical?

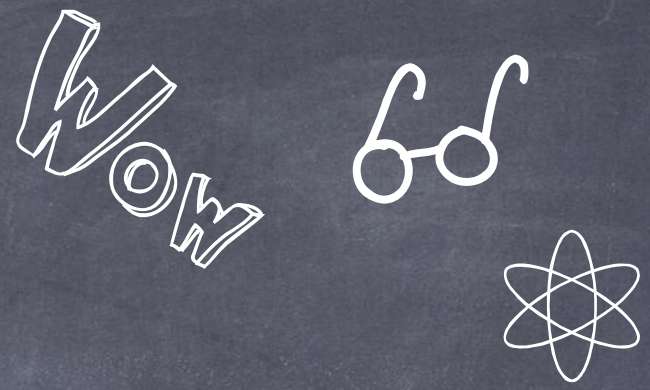
(only 2 - dimension lines discussed)



03

Practice

Problem Solving



03.Practice

Problem Solving

03.Practice

Problem Solving

13. A _____-turn equals 1 right angle.

14. A half-turn equals _____°.

15. A _____-turn equals 270°.

16. A complete turn equals _____ right angles.

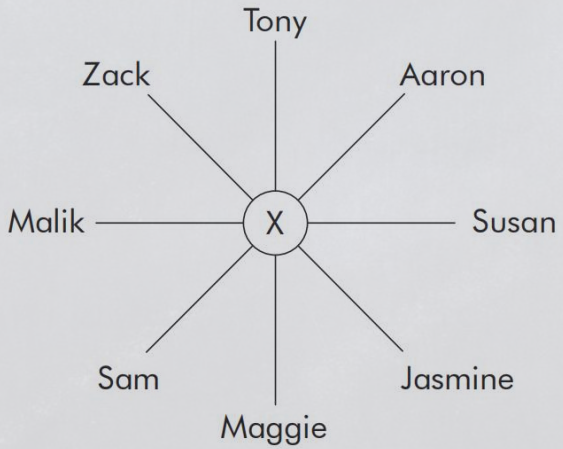
17. _____ of a complete turn is 180°.

18. _____ of a complete turn is 90°.

03.Practice

Problem Solving

19. Which direction is each child from X?



Tony: _____

Aaron: _____

Susan: _____

Jasmine: _____

Maggie: _____

Sam: _____

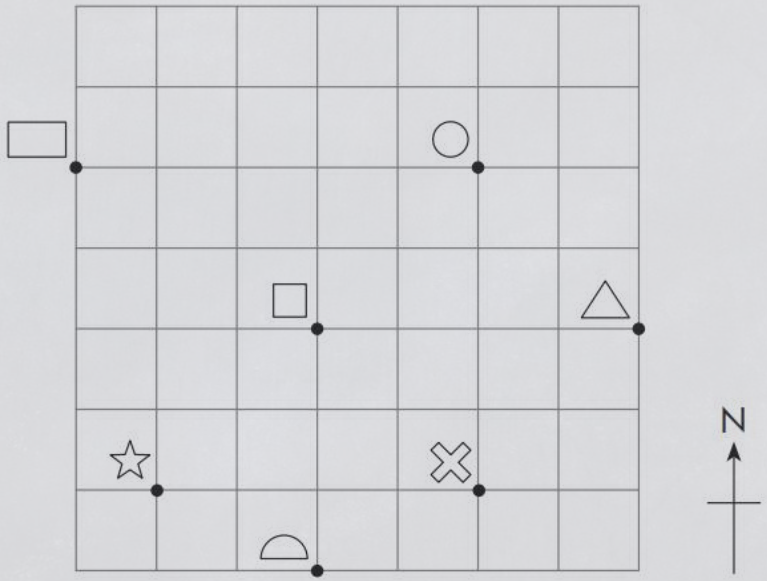
Malik: _____

Zack: _____

03.Practice

Problem Solving

20.

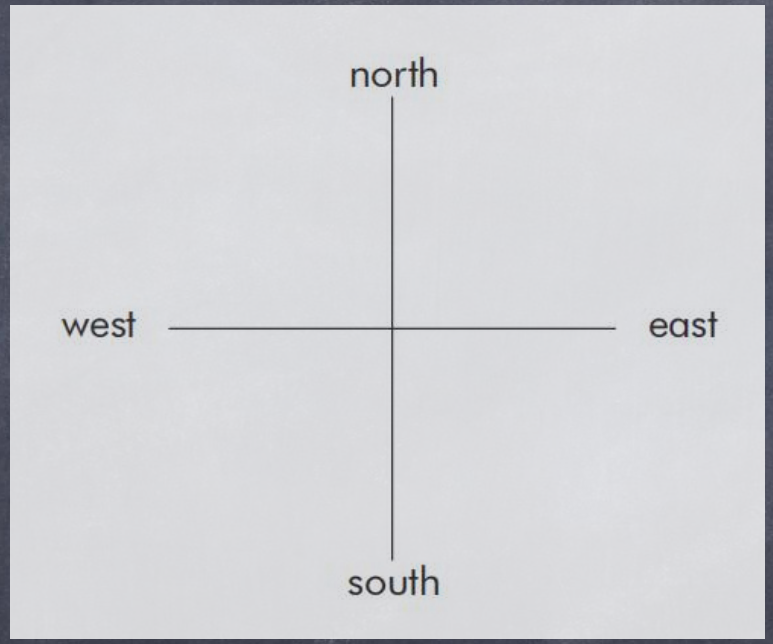


(a) The circle is _ of the triangle.
(b) The semicircle is _ of the star.
(c) The square is _ of the triangle.
(d) The cross is _ of the star.
(e) The square is _ of the semicircle.
(f) The circle is _ of the rectangle.
(g) The triangle is _ of the cross.
(h) The star is _ of the circle.

03.Practice

Problem Solving

21.



(a) George is facing north. If he turns clockwise ____º, he will face southwest.

(b) George is facing west. If he turns counterclockwise ____º, he will face east.

(c) George is facing northwest. If he turns counterclockwise ____º, he will face northeast.

(d) George is facing south. If he turns counterclockwise ____º , he will face southeast.

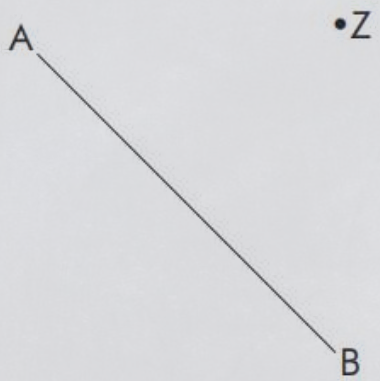
(e) George is facing east. If he makes a ____-turn clockwise, he will face south.

(f) George is facing north. If he makes a ____-turn counterclockwise, he will face east.

03.Practice

Problem Solving

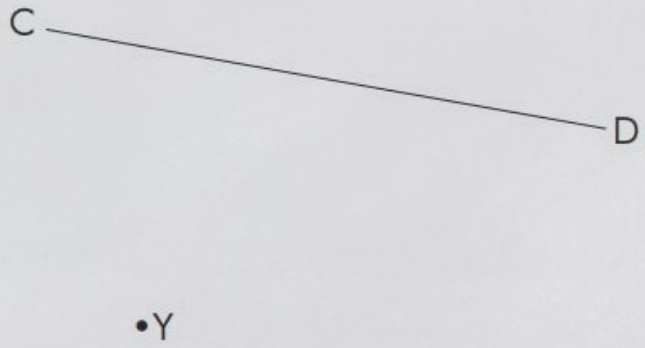
1. Draw a line perpendicular to the line AB through the point Z.



03.Practice

Problem Solving

2. Draw a line perpendicular to the line CD through the point Y.

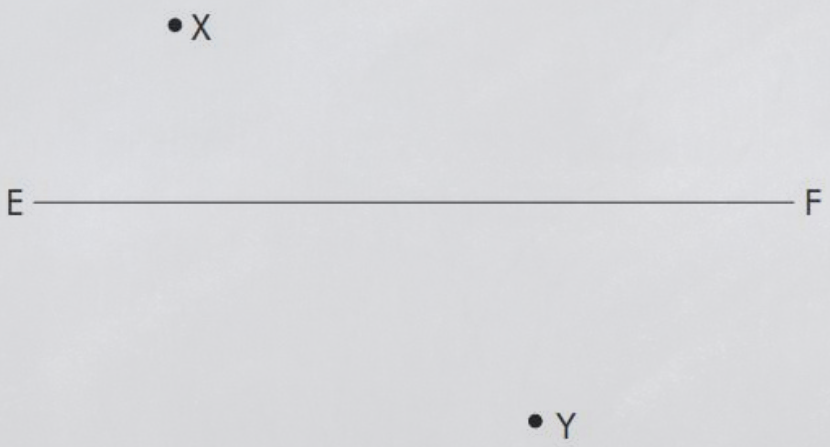


03.Practice

Problem Solving

3. (a) Draw a line perpendicular to the line EF through the point X.

(b) Draw a line perpendicular to the line EF through the point Y.

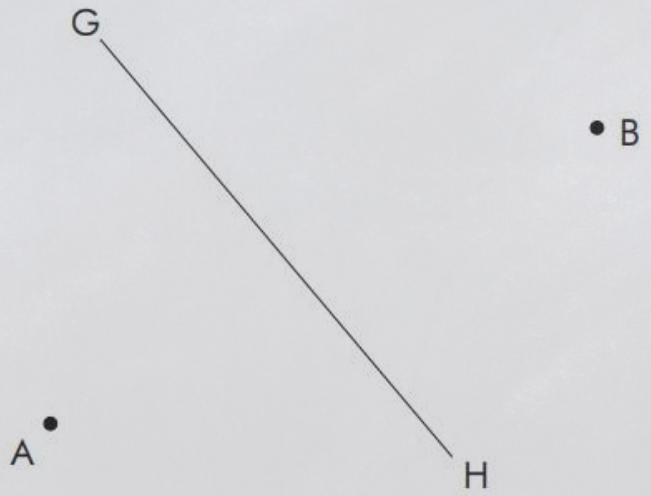


03.Practice

Problem Solving

4. (a) Draw a line perpendicular to line GH through the point A.

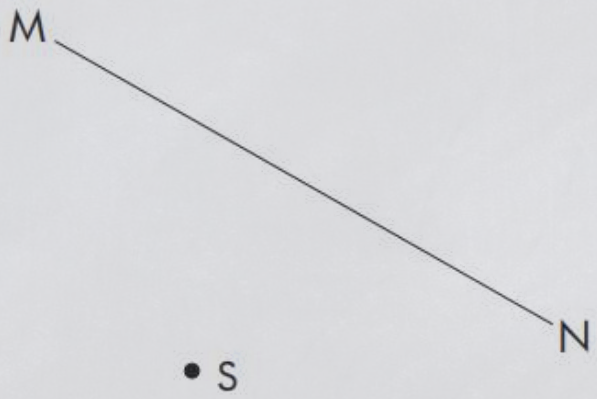
(b) Draw a line perpendicular to line GH through the point B.



03.Practice

Problem Solving

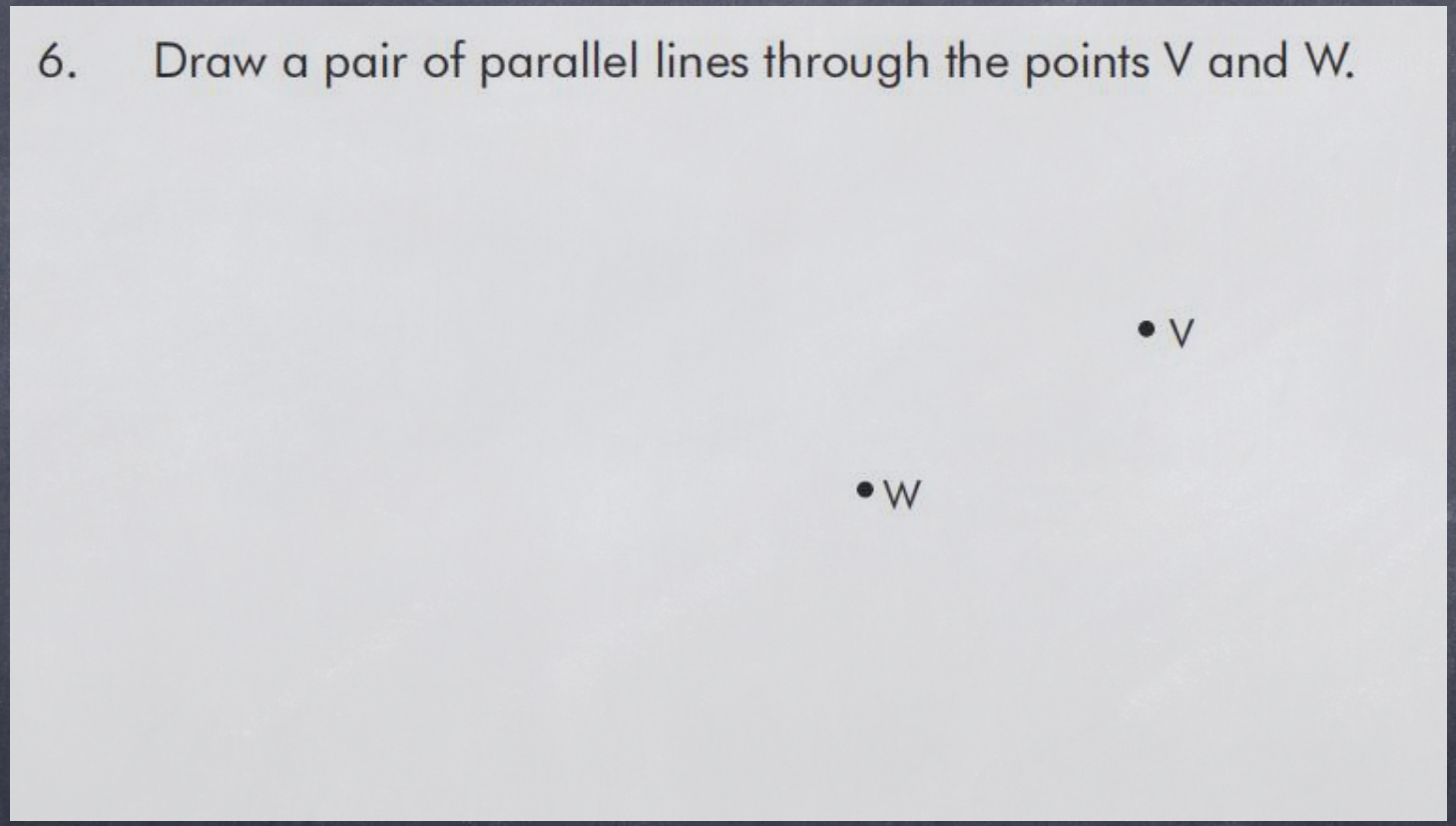
5. Draw a line parallel to MN through the point S.



03.Practice

Problem Solving

6. Draw a pair of parallel lines through the points V and W.

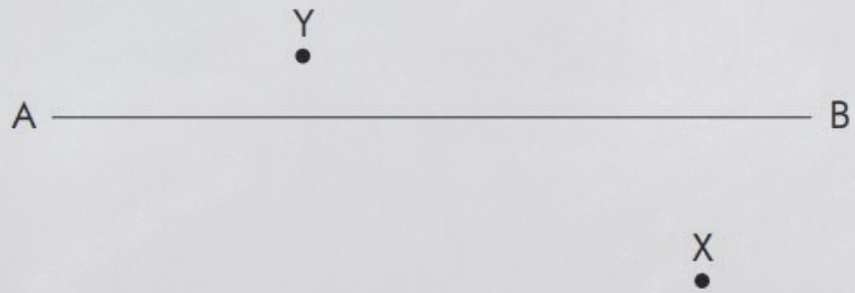


03.Practice

Problem Solving

7. (a) Draw a line parallel to AB through the point X.

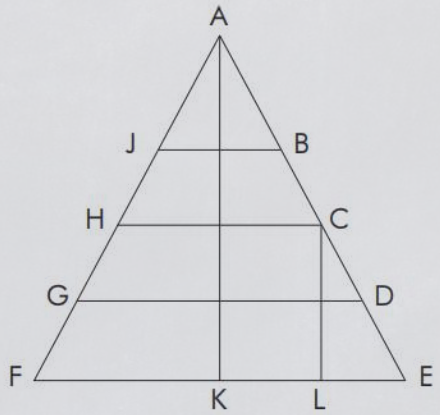
(b) Draw a line parallel to AB through the point Y.



03.Practice

Problem Solving

8.



(a) Identify all pairs of parallel lines in the figure above.

_____

(b) Identify all pairs of perpendicular lines in the figure above.

_____

03.Practice

Problem Solving

9. The figure below shows a section of a brick wall.

   (a) Draw a vertical line through A to meet XY and label it as AB.

   (b) Draw a horizontal line through A and label it as AC.

03.Practice

Problem Solving

10. The figure below shows a rectangular fish tank.

(a) Identify all the horizontal lines. _____

(b) Identify all the vertical lines. _____

03.Practice

Problem Solving

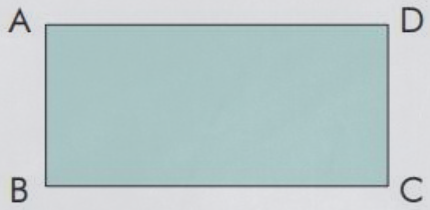
11. The figure on the right shows a box.

(a) Line AB is a _____ line.

(b) Line BC is a _____ line.

(c) Line DC is a _____ line.

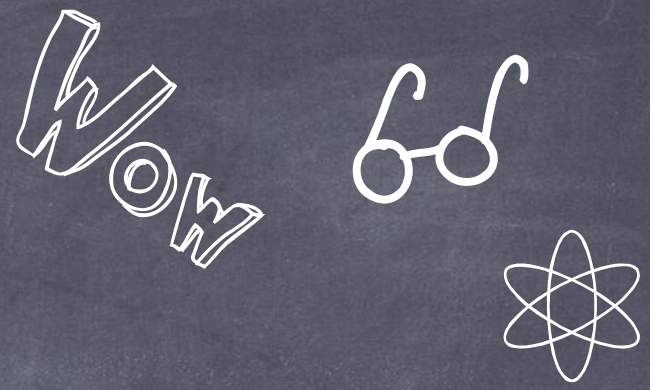
(d) Line AD is a _____ line.



04

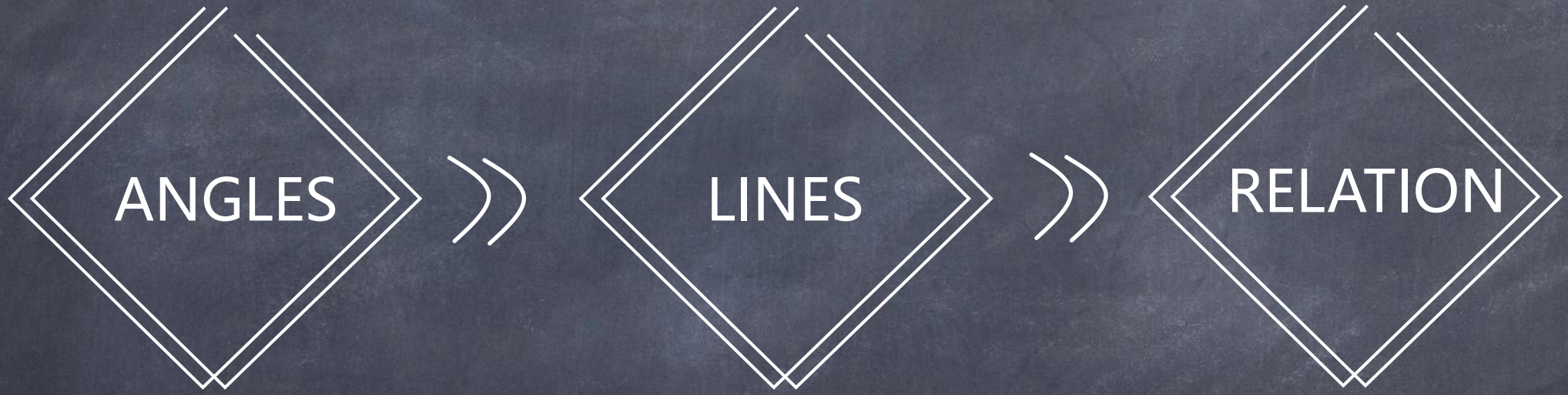
Summary

Reflection On Our Work



04.Summary

Reflection On Our Work



04.Summary

Reflection On Our Work

ANY QUESTION?

Remind to do some exercise after class!

Thanks!

Remind to do some exercise after class!

Instructor: Franky Chan