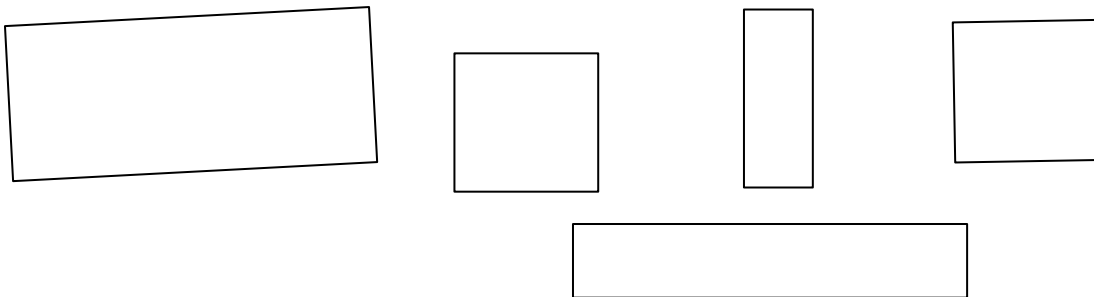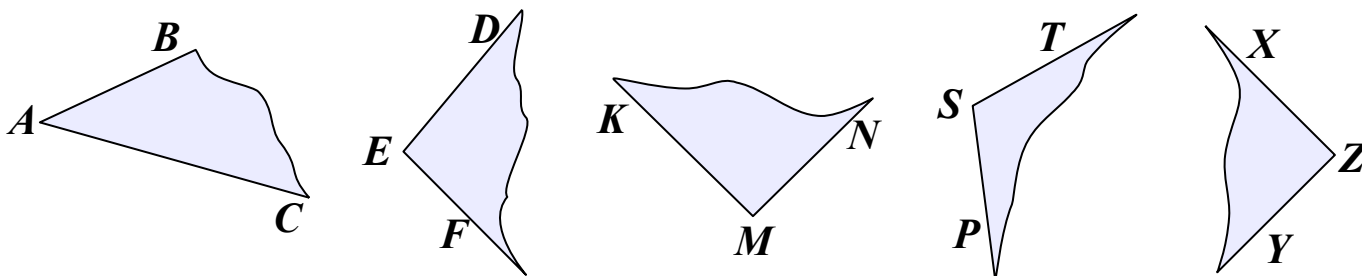# Homework 9

1. How many right angles does each quadrilateral below have? Right the number inside quadrilateral.

2. Cross out the angles that are not right angles. (use your right angle template to check)

B

D

A

K

T

X

S

E

N

Z

C

F

M

P

Y

3. One penny out of 3 is fake. It could be lighter or heavier than others. How can you identify the fake coin by using a balance scale like the one shown in the picture? How may time should you weight?
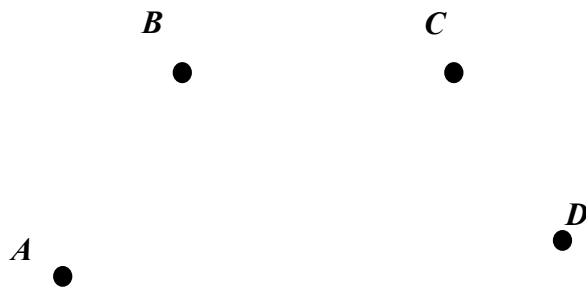
4.   Calculate:

	2	9				5	5	3				1	3	7				2	7	1				3	3	3				1	2	3	
+	3	5			+	3	4	7			+	2	9	4			+	3	4	9			+	7	7	7			+	3	9	8	

5.

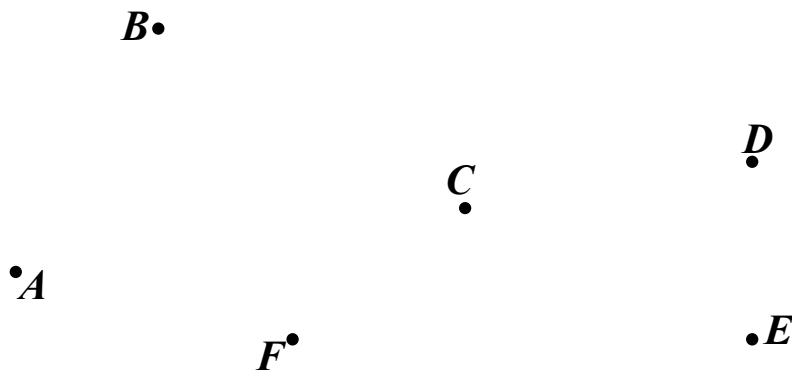**a)** Draw 5 line segments, which connect some points in the drawings to obtain 5 triangles. Write down the names of the triangles.

B •   **C** •
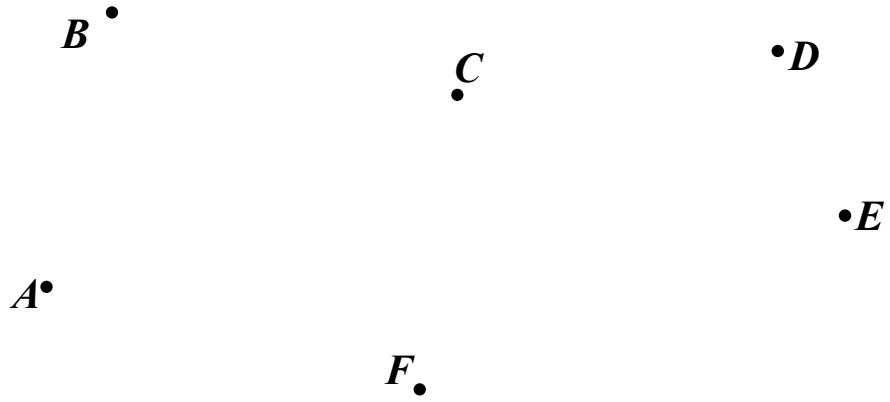
                                    D
                                     •
A
 •

Triangles: _____

b) Connect the appropriate points to draw a triangle with a right angle (use a right angle template).

B•

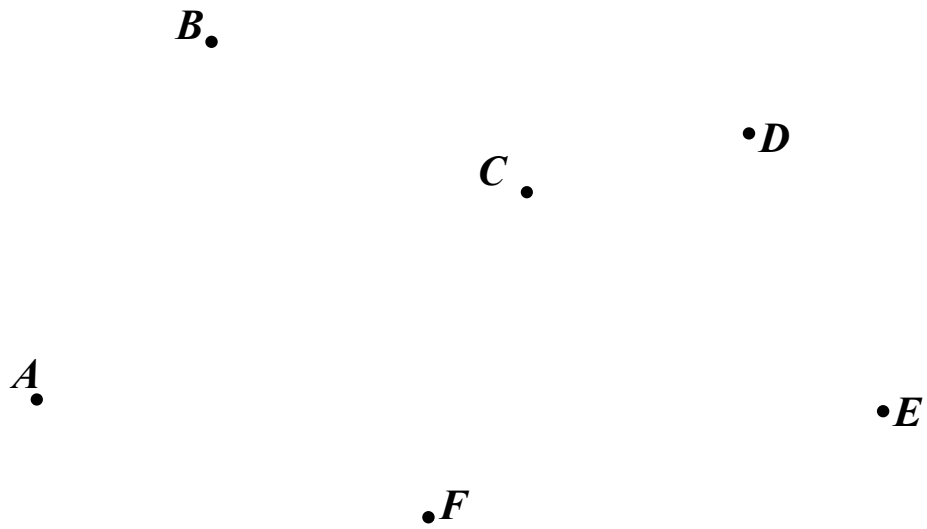   **D**
                              C   •
                               •
 •**A**

              F•   •**E**

c) Connect the appropriate points to draw a quadrilateral with a right angle. (use a right angle template).

B •

C
•

•D

•E

A•

F
•

d) Connect the appropriate points to draw a quadrilateral with two right angles.

B
•

•D

C
•

A
•

•E

•F

6. Solve for x. Use diagrams. Check your answers.

$672 - x = 162$ $\qquad$ $x + 281 = 503$ $\qquad$ $x - 127 = 381$
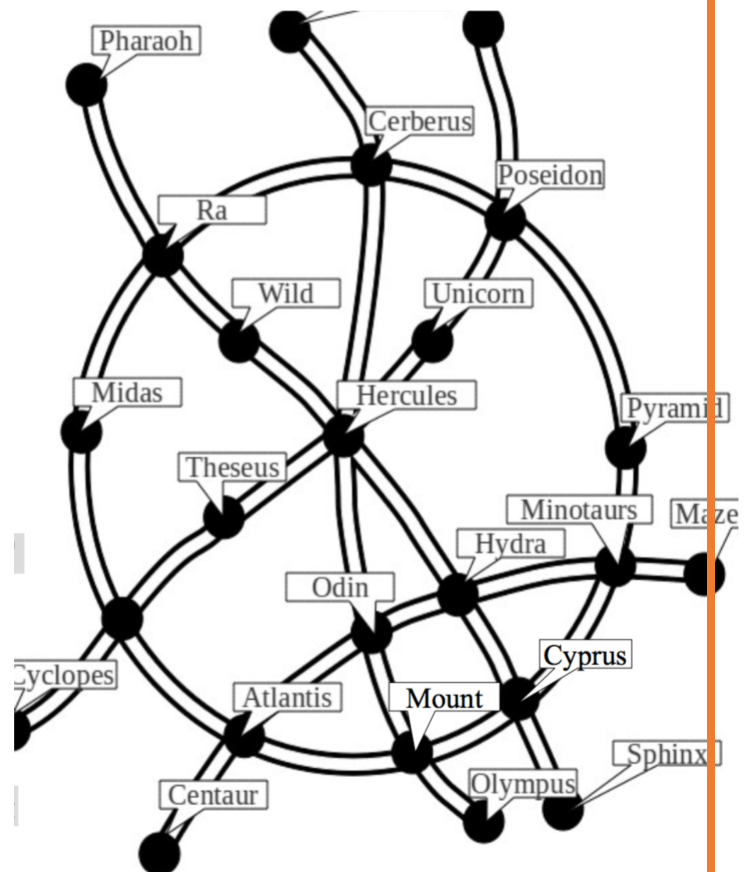
_____

_____

_____

7. An engineer has proposed the design for Wonder-burg's subway network. How many lines did he propose? Trace them to help you.

How many lines pass through the station "Odin" ? How many through the station "Hercules"?
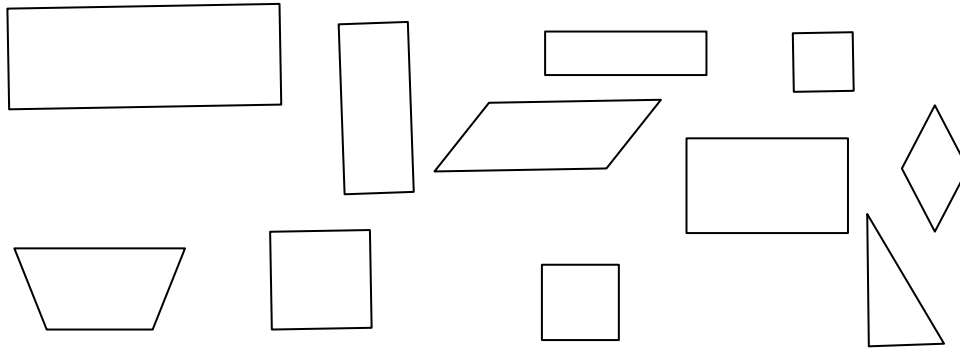
What stations should one pass through to get from "Theseus" to "Cyprus"?

What is the shortest way to get from "Mount" to "Wild"? How many different ways can you go from "Mount" to "Wild" with only one transfer?

How many different ways can you get from "Midas" to "Hercules" with only one transfer?

Pharaoh

Cerberus

Poseidon

Ra

Wild

Unicorn

Midas

Hercules

Pyramid

Theseus

Minotaurs   Maze

Hydra

Odin

Cyclopes

Cyprus

Atlantis   Mount

Sphinx

Centaur

Olympus

8. Circle all of the rectangles. Draw a ✓ check mark inside all of the squares.

9.
  a) The length of a rectangle is 37 cm and its height is 14 cm. Calculate the perimeter of the rectangle.

P = _____

  b) The length of a rectangle is 37 cm, which is 14 cm more than its height. Calculate the perimeter of the rectangle.

P = _____

10. A polygonal chain has 3 segments. The length of the first segment is 5 cm, the length of the second segment is 1cm shorter, than the length of the first one and the length of the third segment equals the sum of the 1st and 2nd segments. Finds the total length of the polygonal chain in. Draw this chain.

11. Write down an equation and solve it:
  a) The first addend is unknown, the second in 138. The sum is 207. Check!

_____

_____

_____

_____ ✔

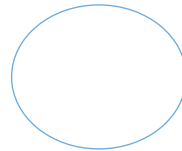b) Subtract 471 from x and get 529

_____

_____
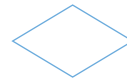
_____

_____ ✔

12. Arrange the sets appropriately:

Animals

Furry animals

Cats

Dogs

13. Fill in the missing digits

$$
\begin{array}{r}
4\ \ 5 \\
+\ \ \ 2 \\
\hline
8\ 5\ 6
\end{array}
\qquad
\begin{array}{r}
9 \\
-\ 2\ \ 2 \\
\hline
2\ 4\ 6
\end{array}
\qquad
\begin{array}{r}
3\ \ 8 \\
+\ \ \ 3 \\
\hline
5\ 9\ 2
\end{array}
\qquad
\begin{array}{r}
7\ 1 \\
-\ \ \ \ 8\ 5 \\
\hline
4\ \ \ 7
\end{array}
$$