Math 2 Classwork 10

WARM UP

1

Calculate:

		6	0	7					3	0	5				7	0	4					
	-	1	0	8				-		7	7			-		2	9					
		1	0	8					3	2	9				4	8	9					
	+	1	1	9				+	2	0	3			+		1	4					

2

Solve equations and check your answers:

a) $14 + x = 26$

b) $x - 18 = 33$

c) $89 - a = 71$

3

Mental math.

24 + 56 =	100 – 80 =	43 – 13 =	35 + 15 =
10 + 95 =	60 + 60 =	51 – 22 =	28 – 14 =

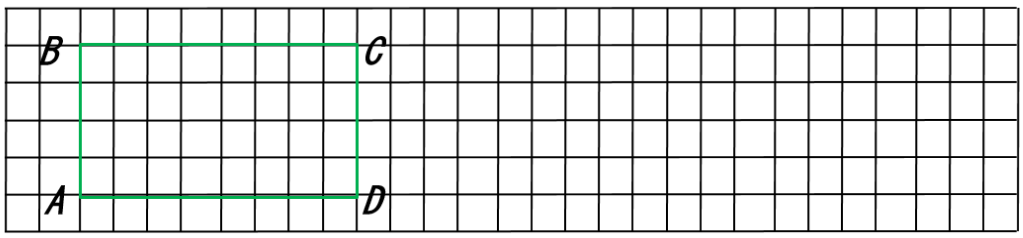
Homework Review

Find the perimeter of the rectangle ABCD plotted on the drawing. Express the perimeter P (sum of lengths of all sides) in units of length.

Draw another rectangle KLMN next to the ABCD such as:

length of side KL is one unit longer then AB and length of side LM two units bigger than BC.

What is the perimeter of the new rectangle KLMN?



Length of side $\overline{AB}$= 4 units

Length of side $\overline{BC}$ = 8 units

P = _____

$\overline{KL}$=_____

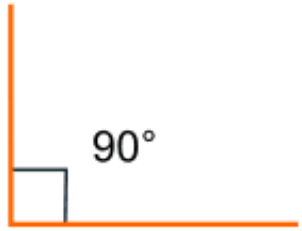
$\overline{LM}$ = _____

P = _____

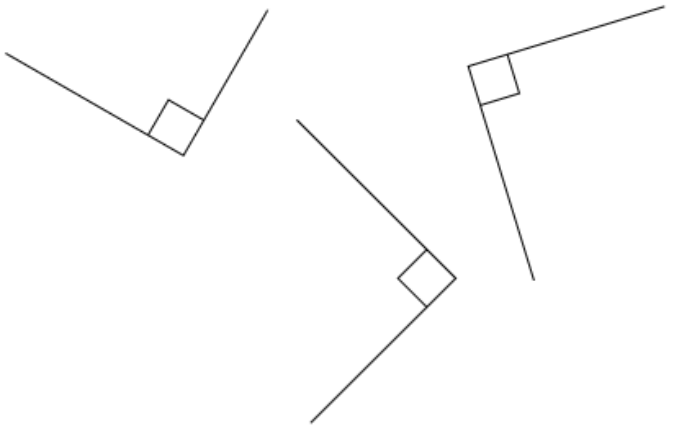
New Material I

Making a Right Angle Template.

4 Fold a sheet of paper in half and then in half again. Using a ruler trace the creases with a pencil. How many straight lines did you get? How many angles do these lines form?

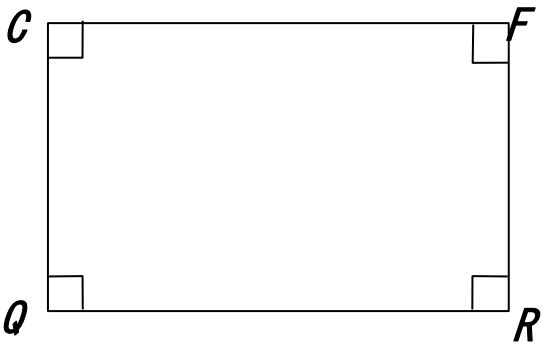


Note the special symbol in the angle. If we see this box, it is a right angle. The 90° is rarely written in.
All the angles below are right angles. Use your right angle template to check it.

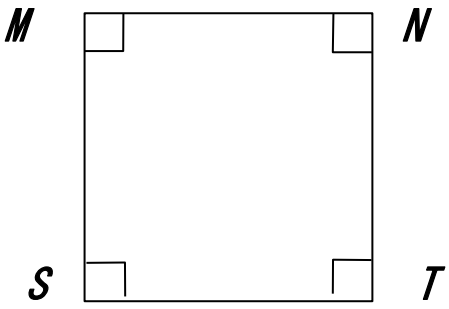


5 Find examples of right angles in your room.

6 a) Write a name of the rectangle _____
Using a ruler measure sides CF and QR _____
Using a ruler measure sides CQ and FR _____
What did you notice?



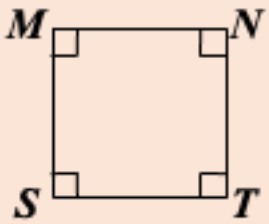
b) Write a name of the square _____
Using a ruler measure sides CF and QR _____
Using a ruler measure sides CQ and FR _____
What did you notice?

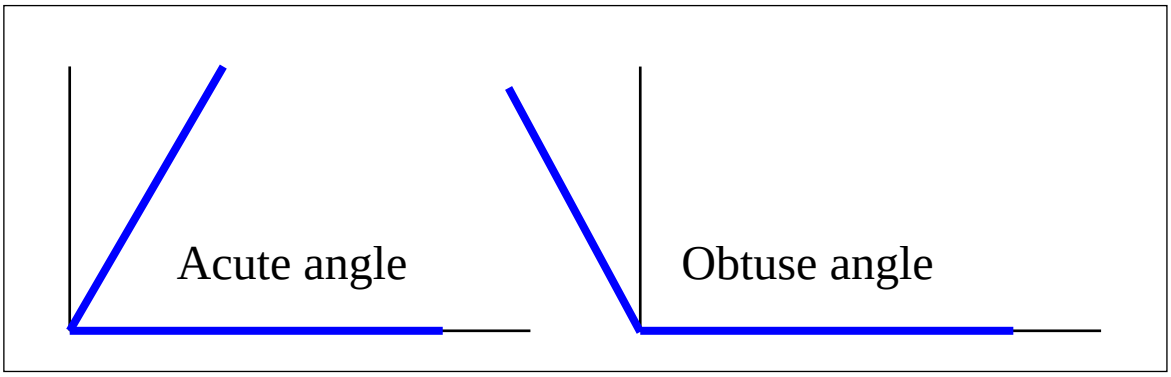


Special quadrilaterals:

Rectangle: a quadrilateral in which all four angles are right angles.

Square: a quadrilateral in which all 4 angles are right angles, and all 4 sides are of equal length.





Types of angles:

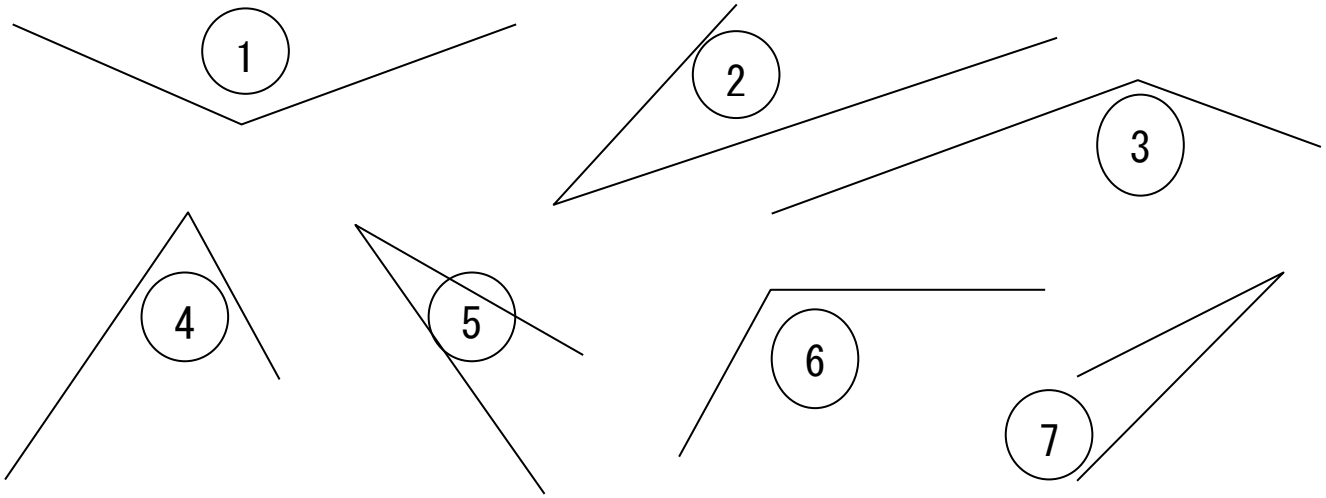
An **acute angle** is an angle that is smaller than a right angle.

An **obtuse angle** is an angle that is larger than a right angle.

7 Use a right angle template to find all acute angles and all obtuse angles. List them:

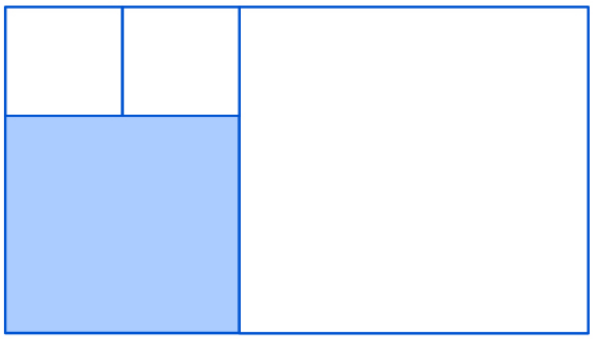
a) The acute angles _____

b) The obtuse angles _____



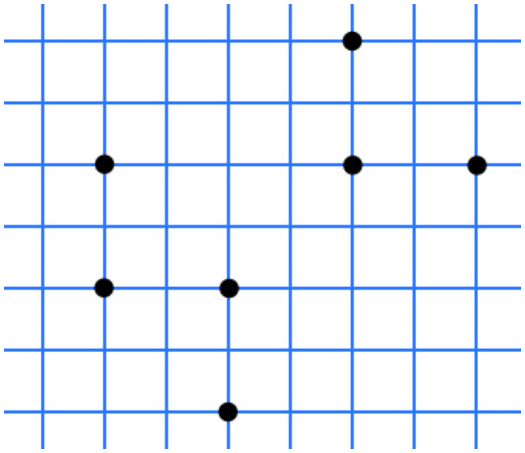
8 Quadrilateral is divided in squares. Find a perimeter of a quadrilateral if one side of the shaded square is 8 cm.

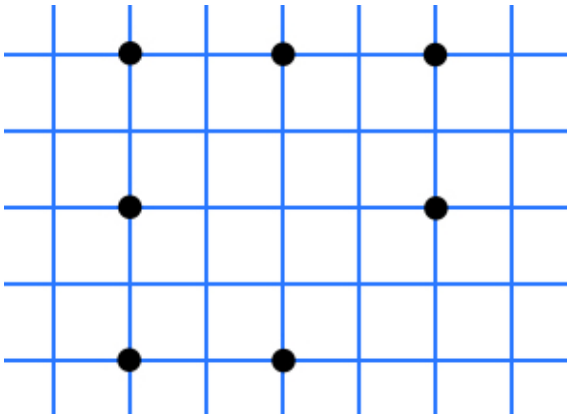
P = _____



9 Connect exactly four points on the pictures below to make

a) a rectangle
b) a square





REVIEW

10 Compare if possible, using >, <, or =. Cross out everything what cannot be compared. Explain.

23 kg ☐ *5 kg*	*68 cm* ☐ *86 cm*	*3 dm* ☐ *16 cm*
18 l ☐ *37 l*	*51 dm* ☐ *57 dm*	*7 m* ☐ *8 kg*

11 Compare expressions using >, <, or =:

a ☐ *a + c*	*a + b* ☐ *b + a*	*38 – b* ☐ *68 – b*
b ☐ *b – 5*	*k + 26* ☐ *62 + k*	*a – 0* ☐ *a + 0*
4 ☐ *d – d*	*54 + n* ☐ *54 – n*	*c – 19* ☐ *c – 90*

12 Check if the equality 12 – 8 = 3 + 1 still holds if

a) We add 7 to the left part and 4 to the right part _____
b) We add 10 to both parts _____
c) We add 5 to the right part _____

Check if equality 15 – 4 = 5 + 6 still holds if

a) We subtract 5 from the right side _____

b) We subtract 6 from both sides _____

c) We subtract 1 from the left side and add 1 to the right side _____

13 Write down the following expressions:

The sum of *m* and *n* _____

The difference between *34* and *x* _____

The difference between *200* and *48*_____

Challenge yourself

14 There are apples on three plates: 1 apple on the 1st plate, 3 apples on the 2nd plate, and 8 apples on the 3rd plate. Move apples from plate to plate to make the number of apples on each plate the same. Follow the rules:

- In one move, you can take any number of apples from one plate and move them to the other plate.
- The number of apples you can add to any plate should be equal to the number of apples that are already there. In other words, you can only double the number of apples that are already on the receiving plate.
- The total number of moves is unlimited.