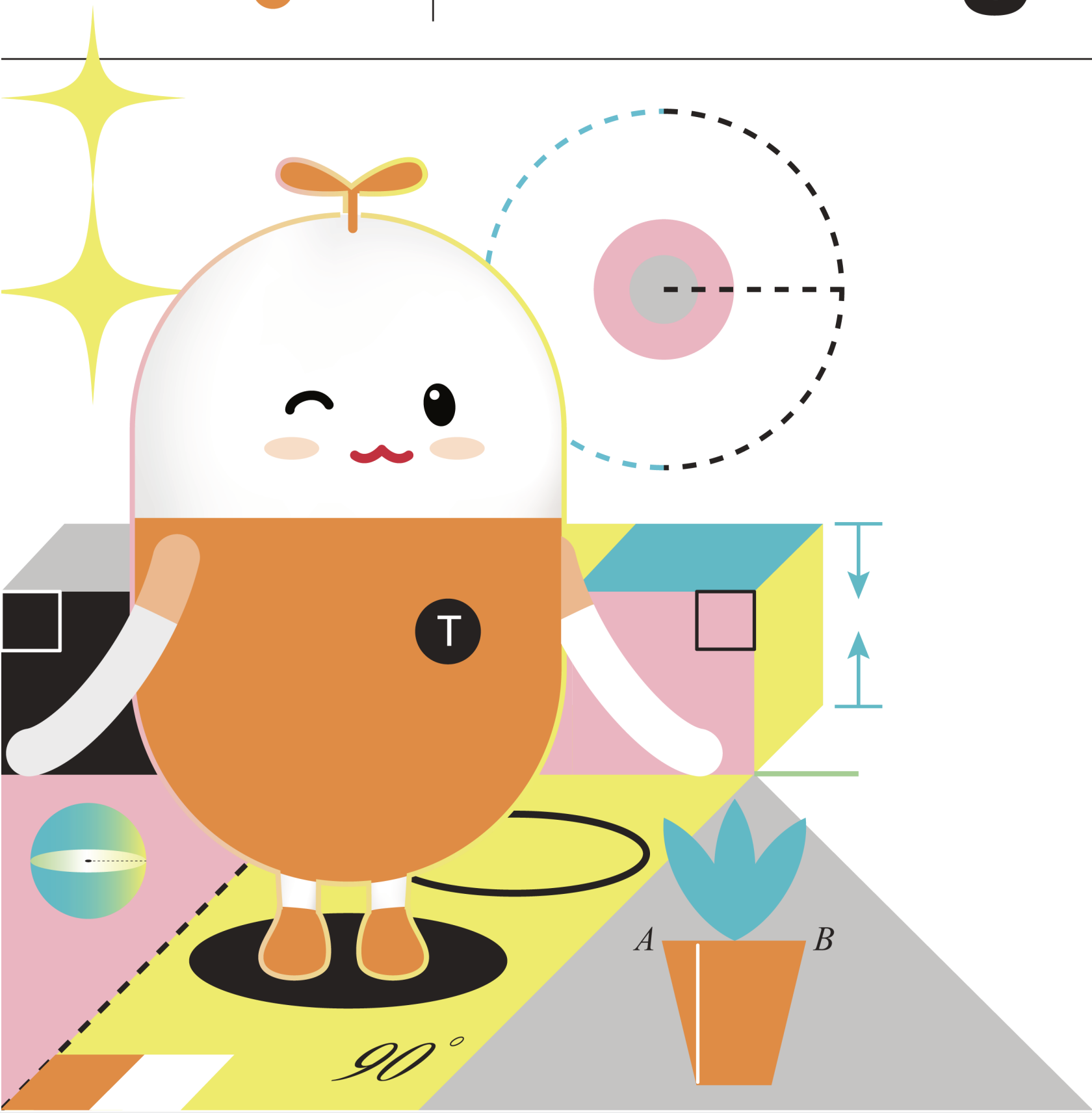




Keep → Thinking





 <https://www.thethinkacademy.com/>

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学而思美国ONLINE

学前&小低数学课程体系

Think Academy 学前和小学低年级长期班体系专为 **3-8岁** 的小朋友打造，提供专业、系统且全面的全年数学课程。课程依据北美学生的学习特点与需求，通过培养孩子的**七大能力**：运算能力，逻辑推理能力，空间想象能力，测量与数据能力，创造力，表达力，和思辨力，帮助孩子在未来的理科学习中持续领先。

学前长期班根据学生的数学基础划分为Honors和Challenge体系，确保不同水平的学生都能找到适合的学习路径。**两个体系的大纲相同**，保障孩子们在小学低年级的阶段（PreK-G2）获得**足够的思维能力锻炼**，为小学高年级以后加快数学进度打好基础。此外Challenge在Honors班的基础上**增加了少量的竞赛拓展**，帮助孩子们顺利衔接小学高年级的奥数体系。

PreK：PreK的思维能力课不分班，孩子在进入K年级前有分班考试，结合孩子的上课表现与学习目标进入不同难度的课程。

Honors体系：专注培养孩子的七大能力，培养孩子对数学的兴趣与热爱，并具备超前学习和学习竞赛的潜力。

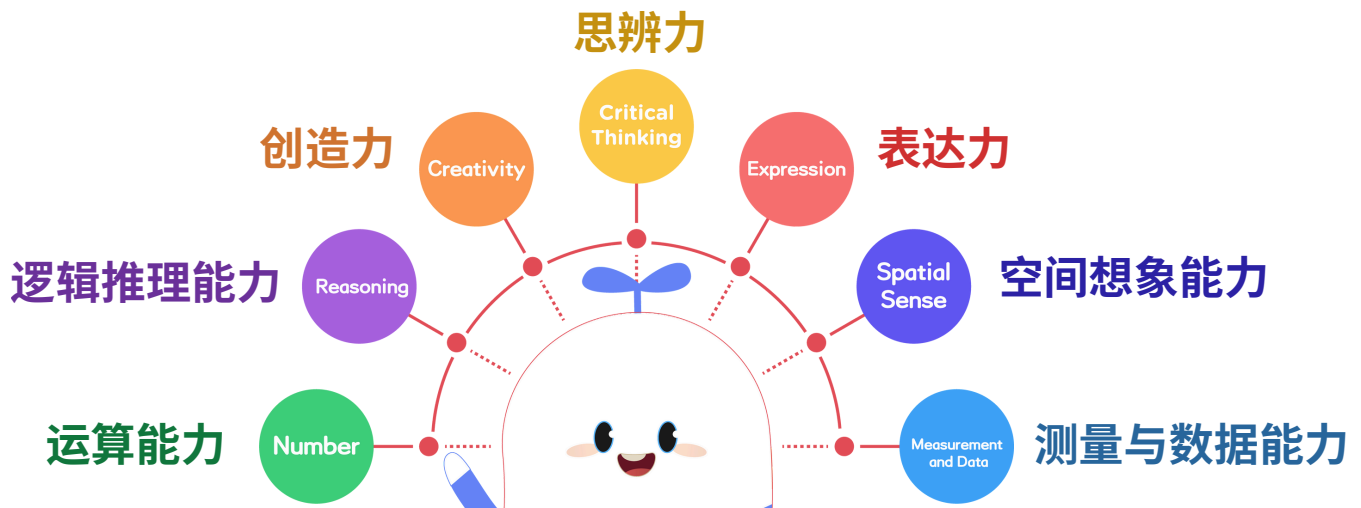
Challenge体系：Challenge课程在Honors课程的基础之上增加了竞赛拓展，对标Math Kangaroo的考纲，帮助孩子从小挑战数学竞赛的奖项。

幼小阶段学习规划				
班级	Pre-K	K	G1	G2
Honors 超前一年，稳固全A，直通顶班	Pre-K Think Ability	K Honors	G1 Honors	G2 Honors
Challenge 竞赛启蒙，加速两年，AP满贯		K Challenge	G1 Challenge	G2 Challenge
Competition 竞赛奠基，名师指导，晋级奥数				G2 Pre-ACE

什么是七大能力？

3大综合输出能力——学以致用

4大核心数学能力——激发兴趣



- 3-8岁是儿童思维发展关键期，
- 通过情景学习保护儿童好奇心，
- 在解决问题中提升孩子的探究乐趣、搭建和锻炼孩子的思维框架，
- 培养主动思维，养成儿童面向未来的学习能力。

创造力	复杂解题能力 加快校内进度 学习竞赛拓展		
思辨力			
表达力			
逻辑推理	应用题		
空间想象	小学几何	代数初步	高等函数
数据处理	统计与图表	平面几何	高中几何
运算能力	计算与巧算	科学课程	AP理科
PreK-G2	G3-G5	G6-G8	G9-G12

课程亮点

家长省心，规划清晰

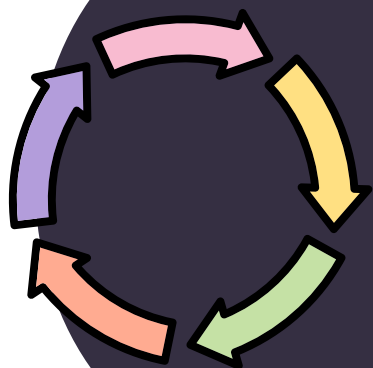
授课老师为孩子定制学习规划， 全程跟踪学习进度

- 报名课程：学习规划老师针对孩子的学习能力与目标，**制定个性化学习方案**。
- 上课期间：每月和家长**反馈孩子的学习情况**，提供有针对性的学习建议，并**监督落实孩子的提升方案**。
- 期中/期末：每学期组织**家长会**，梳理孩子的学习优势和薄弱环节，并制定新学期的学习规划。



每周学习闭环，保障学习效果

- 课前预习：15分钟**课前预习题**，温故而知新
- 课后作业：每节课**配套作业**题目，老师主动和家长反馈学生的作业完成情况。
- Office Hour：**免费作业讲解直播课**，解答孩子课后不明白的题目与知识点。
- 作业解析：每道作业配套**讲解视频**，随时复习错题



全年学习服务支持

- 专业客服，**全年 364 天 Parent APP 在线支持**，快速响应任何问题
- Parents App**直接和授课老师联系**，沟通更高效，随时掌握孩子的学情表现。
- 在线作业答疑，给孩子**最及时的学习帮助**

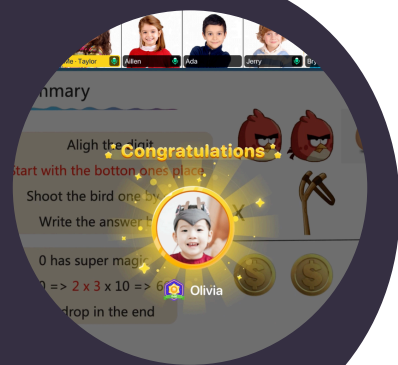


课程亮点

孩子开心，学习更高效

精心打磨课堂设计，让孩子爱上数学

- **互动游戏+情景化教学**，让数学课堂不再枯燥
- **金币激励**，孩子可以用金币兑换实体或虚拟奖品，给孩子更及时的正反馈，让孩子更主动地完成学习任务和目标。



自研上课App，强化线上课程体验

- Think Academy**自主研发的上课App**，给孩子带来更丰富的课上互动，包括举手上台，投票作答，选择填空，集体讨论等互动形式，保障**每3分钟一次互动**的频率，提升孩子的上课投入。
- 老师**实时观察每位孩子**的上课情况，保障孩子的学习体验与效果。



成就感带来底层学习动力

- 不仅课上学习高效，课后也有**完善的辅导答疑服务**。课后作业有视频解析，每周还有免费office hour解答孩子的问题，保障每节课都能学懂。
- 孩子在校内达到**成绩和进度双领先**。更愿意投入时间和精力在理科学习上，增强孩子的学习动力，自推成为**理科学霸**。



Topic 1: Addition and Subtraction up to 1,000

(Recommended Learning Time: 4 days)

1 Solve the following problems using column addition or column subtraction.

(1) $283 + 167 = \underline{\hspace{2cm}}$

$$\begin{array}{r} \overset{1}{2} \overset{1}{8} 3 \\ + 167 \\ \hline 450 \end{array}$$

(2) $714 - 385 = \underline{\hspace{2cm}}$

$$\begin{array}{r} \overset{6}{\cancel{7}} \overset{10}{1} \overset{1}{4} \\ - 385 \\ \hline 329 \end{array}$$



Align the same place vertically, calculate from right to left, and don't forget to regroup.

2 Add using column addition:

(1) $371 + 16 = \underline{\hspace{2cm}}$

(2) $481 + 102 = \underline{\hspace{2cm}}$

3 Add using column addition:

(1) $627 + 40 = \underline{\hspace{2cm}}$

(2) $148 + 301 = \underline{\hspace{2cm}}$

4 Add using column addition:

(1) $234 + 324 = \underline{\hspace{2cm}}$

(2) $333 + 222 = \underline{\hspace{2cm}}$

5 Calculate:

(1) $118 + 211 =$

(2) $224 + 353 =$

(3) $360 + 207 =$

(4) $247 - 115 =$

(5) $498 - 272 =$

6 Solve the following questions using column addition.

(1) $137 + 464 =$ _____

(2) $471 + 277 =$ _____

+			

7 Solve the following questions using column addition.

(1) $386 + 149 = \underline{\hspace{2cm}}$

(2) $345 + 289 = \underline{\hspace{2cm}}$

+			

8 Calculate:

(1) $67 + 54 =$

(2) $178 + 87 =$

(3) $376 + 78 =$

(4) $146 + 498 =$

9 Calculate:
(1) $324 + 57 =$

(2) $262 + 188 =$

(3) $499 + 224 =$

10 Add using column addition:
(1) $172 + 45 =$

(2) $254 + 139 =$

11 Calculate:

(1) $216 + 149 =$

(2) $115 + 685 =$

12 Calculate:

(1) $672 + 219 =$

(2) $564 + 116 =$

(3) $773 + 168 =$

13 Subtract using column subtraction:

(1) $56 - 40 = \underline{\hspace{2cm}}$

(2) $243 - 13 = \underline{\hspace{2cm}}$

(3) $474 - 141 = \underline{\hspace{2cm}}$

14 Calculate:

(1) $384 - 87 =$

(2) $731 - 557 =$

15 Calculate:
(1) $118 - 99 =$

(2) $939 - 481 =$

16 Calculate:
(1) $100 - 47 =$

(2) $202 - 94 =$

(3) $1000 - 481 =$

17 Calculate:

(1) $100 - 78 =$

(2) $306 - 67 =$

(3) $1000 - 876 =$

18 Fill in the blanks.

$$\begin{array}{r} 158 \\ + 576 \\ \hline \square\square4 \end{array}$$

$$\begin{array}{r} 736 \\ - \square\square8 \\ \hline 278 \end{array}$$

19 Fill in the blanks.

(1)

$$\begin{array}{r} \square6\square7\square4 \\ + \square1\square5\square8 \\ \hline \square\square\square2 \end{array}$$

(2)

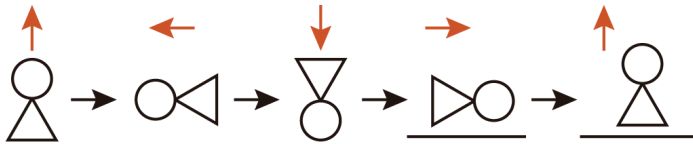
$$\begin{array}{r} \square8\square1\square6 \\ - \square\square\square7 \\ \hline \square5\square3\square9 \end{array}$$

Topic 2: Find the Pattern

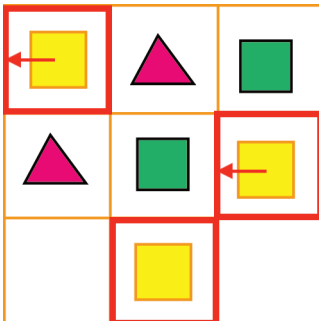
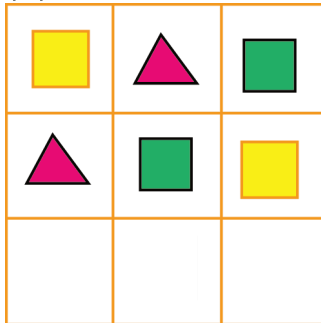
(Recommended Learning Time: 3 days)

1 According to the patterns, fill in the blanks.

(1)



(2)

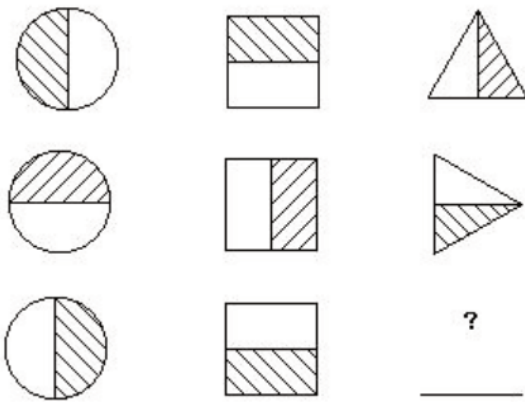


Starting from the first row, each shape moves one grid to the left each time. When the shape is in the leftmost grid, it will move to the rightmost grid next time.

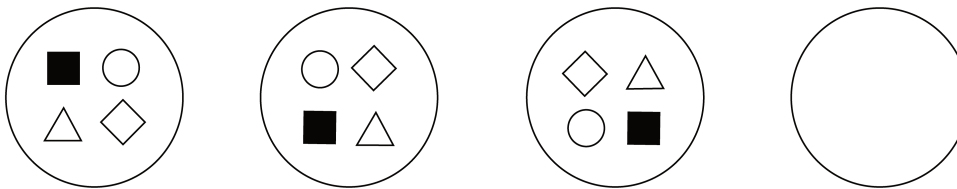


Pattern means that something changes in a regular way. The items may change in quantity, rotating, color, direction...

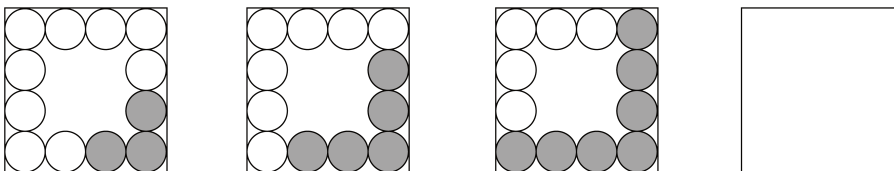
2 According to the pattern, draw the figure in the blank.



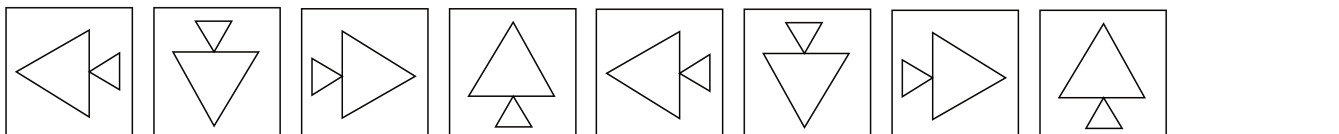
3 According to the pattern, complete the last figure.



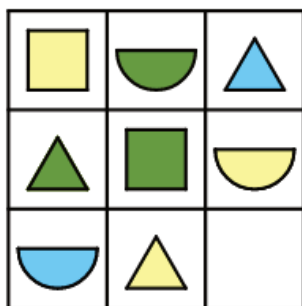
4 According to the pattern, complete the last figure.



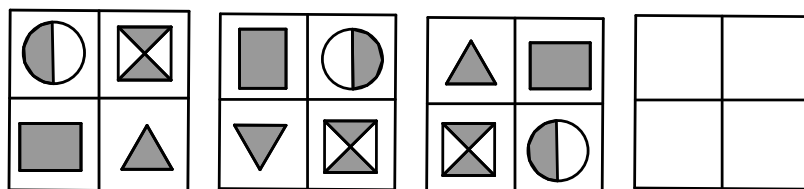
5 According to the pattern, draw the next figure in the blank.



6 According to the pattern, draw the figure in the blank.



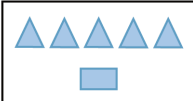
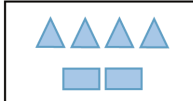
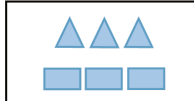
7 According to the pattern, draw the figures in the blanks.



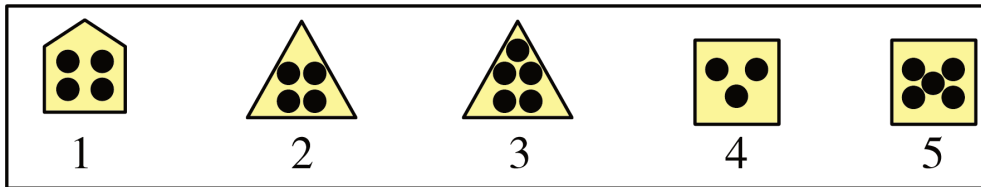
8 Find the patterns and draw the next figures.

(1) $\triangle$ $\bigcirc$ $\square\square$ $\triangle$ $\bigcirc$ $\square\square$ _____

(2)

			
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9 Find the pattern and choose the figure that should be on "?".



10 Find the pattern and draw the next figures.

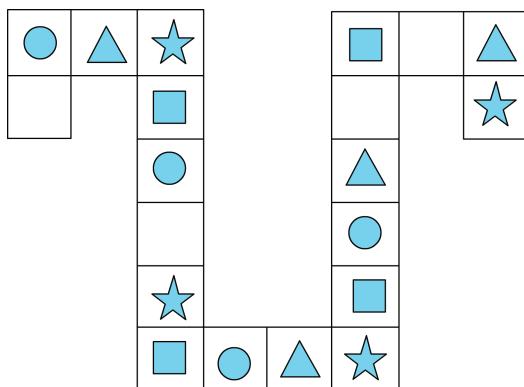
(1) ☆ ☆ △ ☆ ☆ △ _____ .

(2) □ □ △ ○ ○ △ □ □ △ ○ ○ △ □ □ △ _____ .

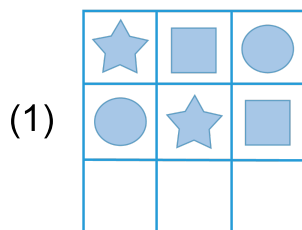
(3) ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ _____ .

(4) _____ .

11 Find the pattern and draw figures in the blanks.

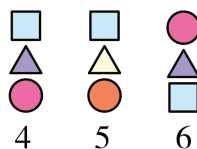
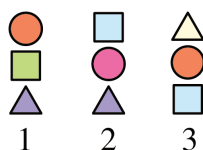
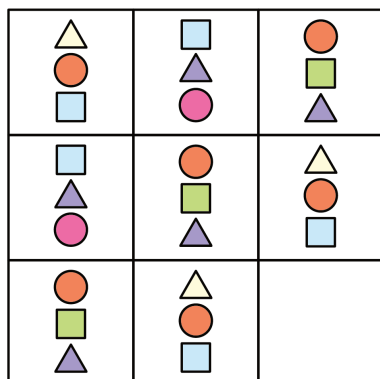


- 12 Find the pattern and fill in the blanks.

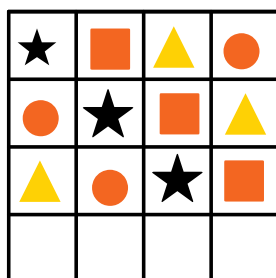


(2) *ABCDE BCDEA CDEAB* _____

- 13 Find the pattern and choose the figure that should be in the blank.

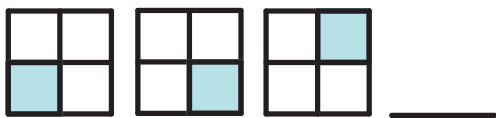


- 14 Find the pattern and draw figures in the blanks.



15 Find the pattern and draw the next figures.

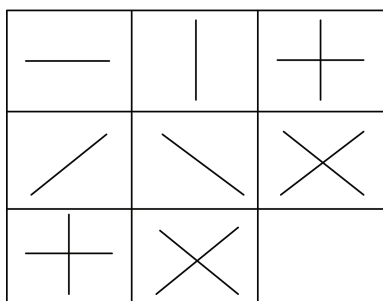
(1)



(2)

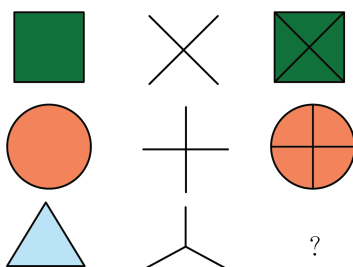


16 Find the pattern and draw the next figure.



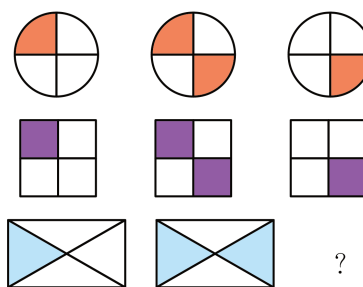
17 Find the pattern and draw figures that should be on "?".

(1)



(1)

(2)



(2)

Topic 3: Operation without Numbers

(Recommended Learning Time: 3 days)

- 1 Find the number each shape represents below! (The same shapes represent the same numbers, and different shapes represent different numbers.)

(1)

$$\text{Sun} = \text{Moon} + \text{Moon}$$

$$\text{Sun} + \text{Sun} + \text{Moon} = 25$$

$$\text{Sun} = \underline{\quad} \quad \text{Moon} = \underline{\quad}$$

$$\overset{10}{\text{Sun}} = \overset{5}{\text{Moon}} + \overset{5}{\text{Moon}}$$

$$\cancel{\text{Sun}} + \cancel{\text{Sun}} + \text{Moon} = 25 \quad \text{Moon} = 25 \div 5 = 5$$

$$\text{Sun} = \underline{10} \quad \text{Moon} = \underline{5}$$

(2)

$$\text{Triangle} + \text{Triangle} + \text{Triangle} + \text{Circle} + \text{Circle} = 23$$

$$\text{Triangle} + \text{Circle} = 9$$

$$\text{Triangle} = \underline{\quad}$$

$$\text{Circle} = \underline{\quad}$$

- 3 Find the number each shape represents below! (The same shapes represent the same numbers, and different shapes represent different numbers.)

$$\text{mouse} + \text{mouse} = 26$$

$$\text{mouse} + \text{bear} + \text{bear} = 43$$

$$\text{bear} = \underline{\hspace{2cm}}$$

$$\text{mouse} = \underline{\hspace{2cm}}$$

- 4 Find the number each shape represents below! (The same shapes represent the same numbers, and different shapes represent different numbers.)

$$\text{flower} + \text{flower} + \text{flower} = 9$$

$$\text{mushroom} + \text{mushroom} + \text{mushroom} = 6$$

$$\text{flower} + \text{mushroom} + \text{eggplant} = 6$$

$$\text{flower} = \underline{\hspace{2cm}}$$

$$\text{mushroom} = \underline{\hspace{2cm}}$$

$$\text{eggplant} = \underline{\hspace{2cm}}$$

- 5 Find the number each shape represents below! (The same shapes represent the same numbers, and different shapes represent different numbers.)

$$\begin{array}{c} \text{lion} \\ + \text{lion} \\ + \text{lion} \end{array} = 18$$

$$\begin{array}{c} \text{lion} \\ + \text{monkey} \end{array} = 10$$

$$\begin{array}{c} \text{lion} \\ = \end{array} \quad \begin{array}{c} \text{monkey} \\ = \end{array}$$

- 6 Fill in the blanks.

$$(1) \quad \text{green circle} - \text{red square} = 9 \quad (2) \quad \text{red star} + \text{red star} = 8$$

$$6 + \text{red square} = 8$$

$$\text{black triangle} + \text{red star} = 9$$

$$\text{green circle} = (\quad)$$

$$\text{red star} = (\quad)$$

$$\text{red square} = (\quad)$$

$$\text{black triangle} = (\quad)$$

- 7 Fill in the blanks. (The same shape represents the same number, and different shapes represent different numbers.)

$$\triangle + \triangle = 18$$

$$\star + \bigcirc = 13$$

$$\triangle + \bigcirc = 15$$

$$\triangle = (\quad)$$

$$\bigcirc = (\quad)$$

$$\star = (\quad)$$

- 8 Fill in the blanks.

$$\star + \star + \star = 15$$

$$\blacksquare = \blacktriangle + \blacktriangle$$

$$\blacktriangle = \star + \star$$

$$\star = (\quad) \quad \blacktriangle = (\quad) \quad \blacksquare = (\quad)$$

- 9 Find the number each shape represents below! (The same shapes represent the same numbers, and different shapes represent different numbers.)

$$\text{purple flower} + \text{purple flower} + \text{light blue flower} = 34$$

$$\text{light blue flower} + \text{light blue flower} + 14 = \text{pink pentagon}$$

$$14 + \text{pink pentagon} = 80$$

$$\text{pink pentagon} = \underline{\hspace{2cm}}$$

$$\text{light blue flower} = \underline{\hspace{2cm}}$$

$$\text{purple flower} = \underline{\hspace{2cm}}$$

- 10 Find the number each shape represents below! (The same shapes represent the same numbers, and different shapes represent different numbers.)

$$\text{eggplant} + \text{carrot} = 30$$

$$\text{eggplant} = \underline{\hspace{2cm}}$$

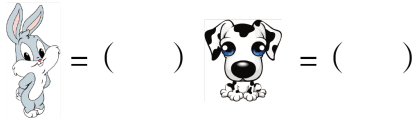
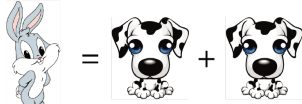
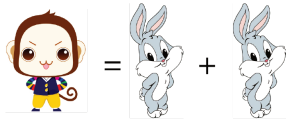
$$\text{eggplant} + \text{potato} = 56$$

$$\text{carrot} = \underline{\hspace{2cm}}$$

$$\text{potato} - 7 = 43$$

$$\text{potato} = \underline{\hspace{2cm}}$$

- 11 A monkey weighs 16 kg. According to the following figures, how many kilograms does a rabbit weigh? How many kilograms does a dog weigh?



- 12 Fill in the blanks.

$$\text{Blue Flower} + \text{Red Flower} = 12;$$

$$\text{Red Flower} = \text{Blue Flower} + \text{Blue Flower} + \text{Blue Flower}.$$

$$\text{Blue Flower} = (\quad)$$

$$\text{Red Flower} = (\quad)$$

- 13 Fill in the blanks. (The same shape represents the same number, and different shapes represent different numbers.)

$$\text{cloud} + \text{cloud} = \text{square}$$

$$\text{cloud} + \text{cloud} - \text{cloud} - \text{cloud} = \text{X}$$

$$\text{cloud} + \text{cloud} + \text{X} + \text{X} + \text{X} + \text{X} + \text{X} = 12$$

$$\text{square} + \text{X} = (\quad)$$

- 14 Fill in the blanks.

$$\text{red square} + \text{black diamond} = 12$$

$$\text{red star} + \text{red star} + \text{red star} = \text{black diamond}$$

$$\text{red star} + \text{red star} + \text{red square} = 11$$

$$\text{red star} = (\quad) \quad \text{black diamond} = (\quad) \quad \text{red square} = (\quad)$$

- 15 Find the number each shape represents below! (The same shapes represent the same numbers, and different shapes represent different numbers.)

$$\star + \text{crescent} = 15$$

$$\star = \text{crescent} + \text{crescent} + \text{crescent} + \text{crescent}$$

$$\text{crescent} = \underline{\hspace{2cm}}$$

$$\star = \underline{\hspace{2cm}}$$

- 16 Fill in the blanks. (The same shape represents the same number, and the different shapes represent different numbers.)

(1)

$$\text{peach} + \text{cheese} = 12$$

$$\text{cheese} + \text{cheese} = \text{peach}$$

$$\text{peach} = (\quad) \quad \text{cheese} = (\quad)$$

(2)

$$\text{apple} - \text{sun} = 24$$

$$\text{sun} + \text{sun} + \text{sun} + \text{sun} = \text{apple}$$

$$\text{apple} = (\quad) \quad \text{sun} = (\quad)$$

- 17 Fill in the blanks. (The same shape represents the same number, and different shapes represent different numbers.)

(1)

$$\text{Red Circle} + \text{Red Circle} + \text{Green Square} = 21$$

$$\text{Red Circle} + \text{Red Circle} + \text{Green Square} + \text{Green Square} = 26$$

$$\text{Red Circle} = (\quad) \quad \text{Green Square} = (\quad)$$

(2)

$$\text{Purple Hexagon} + \text{Purple Hexagon} + \text{Teal Diamond} + \text{Teal Diamond} + \text{Teal Diamond} + \text{Teal Diamond} + \text{Teal Diamond} = 85$$

$$\text{Purple Hexagon} + \text{Teal Diamond} + \text{Teal Diamond} = 35$$

$$\text{Teal Diamond} = (\quad) \quad \text{Purple Hexagon} = (\quad)$$

- 18 Fill in the blanks. (The same shape represents the same number, and different shapes represent different numbers.)

$$\text{Orange Square} + \text{Orange Square} + \text{Yellow Triangle} + \text{Yellow Triangle} = 14$$

$$\text{Yellow Triangle} + \text{Yellow Triangle} + \text{Orange Square} = 10$$

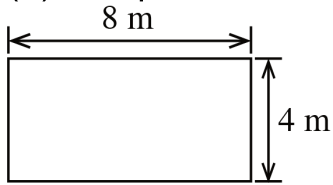
$$\text{Yellow Triangle} = (\quad)$$

$$\text{Orange Square} = (\quad)$$

Topic 4: Perimeter

(Recommended Learning Time: 3 days)

- 1 (1) The perimeter of the rectangle is _____ m.

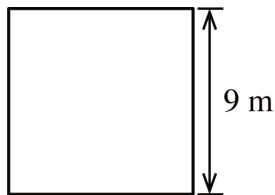


$$8 \times 2 + 4 \times 2 = 24$$

$$\text{or } (8 + 4) \times 2 = 24$$

The perimeter of rectangle is 24 m.

- (2) The perimeter of the square is _____ m.



$$9 \times 4 = 36$$

The perimeter of square is 36 m.

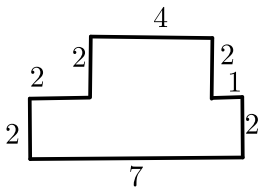


Perimeter is the distance around a closed plane shape.
Perimeter of rectangle
= length $\times$ 2 + width $\times$ 2
= (length + width) $\times$ 2.
Perimeter of square = side length $\times$ 4.

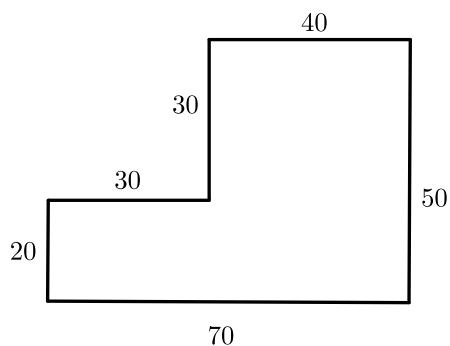
2 Which of the following figures does not have a perimeter?



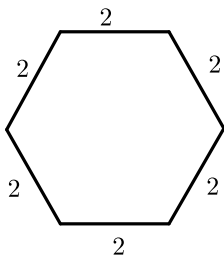
3 The perimeter of the figure below is _____.



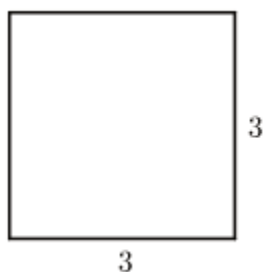
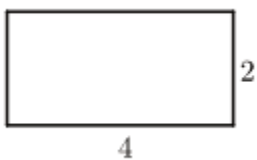
4 The perimeter of the figure below is _____.



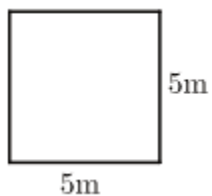
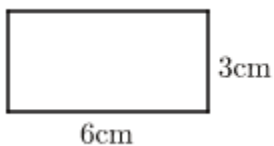
5 The perimeter of the figure below is _____ .



6 The perimeter of the rectangle is _____. The perimeter of the square is _____ .

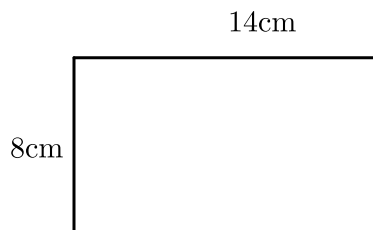


7 The perimeter of the rectangle is _____ cm. The perimeter of the square is _____ m.

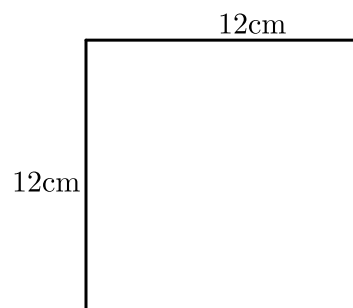


8 Calculate:

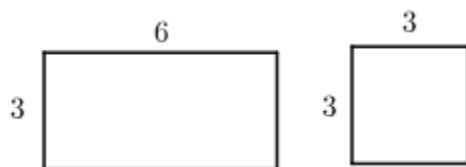
(1) The perimeter of the rectangle below is _____ cm.



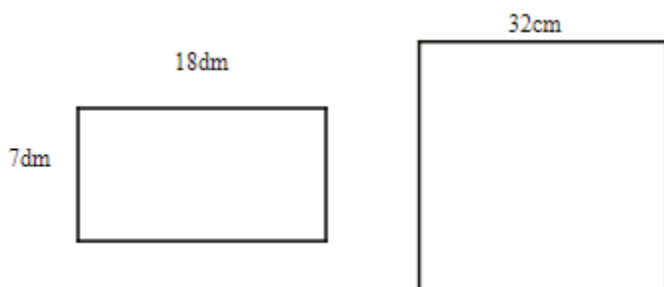
(2) The perimeter of the square below is _____ cm.



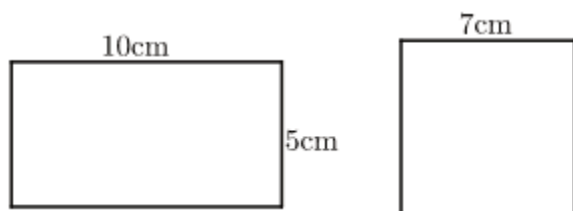
9 The perimeter of the rectangle is _____. The perimeter of the square is _____.



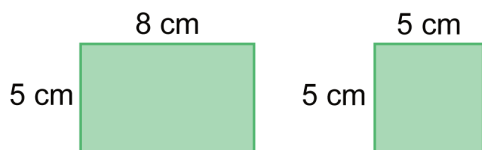
- 10 The perimeter of the rectangle is _____ dm. The perimeter of the square is _____ cm.



- 11 The perimeter of the rectangle is _____ cm. The perimeter of the square is _____ cm.



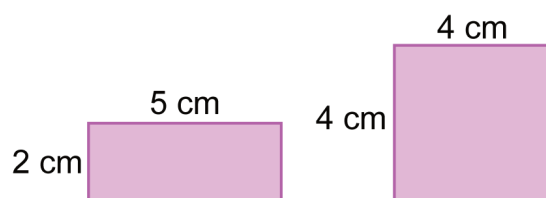
- 12 The perimeter of the rectangle is _____ cm. The perimeter of the square is _____ cm.



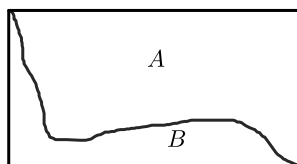
- 13 The perimeter of the rectangle is _____. The perimeter of the square is _____.



- 14 The perimeter of the rectangle is _____ cm. The perimeter of the square is _____ cm.

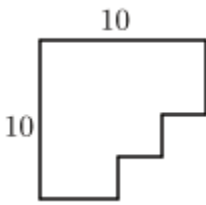


- 15 Which statement below is right?

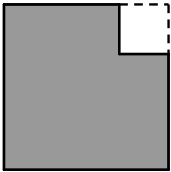


- A. Figure A and figure B has the same perimeter.
- B. Figure A's perimeter is longer.
- C. Figure B's perimeter is longer.

- 16 The perimeter of the figure below is _____ .

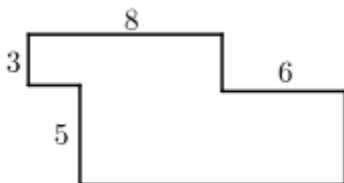


- 17 Cut a small square out of a large square card. Which statement is right?



- A. The perimeter of the large square doesn't change.
- B. The perimeter of the large square decreases.
- C. The perimeter of the large square increases.

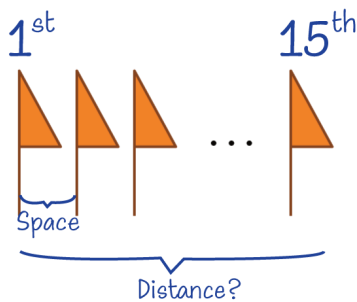
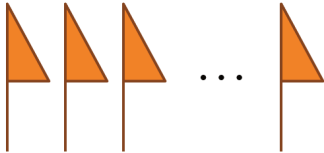
- 18 The perimeter of the figure below is _____ .



Topic 5: Intervals

(Recommended Learning Time: 4 days)

- 1 James puts 15 flags every 2 m on one side of the road. The width of each flag is negligible. The distance between the first flag and the 15th flag is _____ m.



Space: $15 - 1 = 14$

Distance: $14 \times 2 = 28$



The number of spaces or intervals is 1 less than that of the flags.

- 2 How many spaces are there between the fingers of one hand?



- 3 One piece of wood can be cut into _____ sections with 3 cuts.
One piece of wood can be cut into _____ sections with 6 cuts.
One piece of wood can be cut into _____ sections with 11 cuts.
(Cut the wood in the same way as shown below.)



- 4 There is a road in a park. If workers plant 17 trees on one side of the road as shown below. The road is divided into _____ segments.



- 5 There is a 420-meter road in a park. If workers plug 22 flags on one side of the road, and both ends have flags plugged, the road is divided into _____ segments.



- 6 If workers plant 34 trees on one side of the road as shown below. The road is divided into _____ segments.



- 7 There is a 100-meter road in a park. If workers plant 10 trees on one side of the road, and both ends have trees planted, the road is divided into _____ segments.

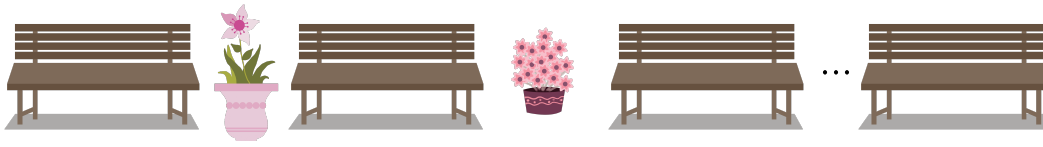
8 There is a 230-meter road in a park. If workers plant 17 trees on one side of the road, and both ends have trees planted, the road is divided into _____ segments.

9 There is a 220-meter road in a park. If workers plant 22 trees on one side of the road, and both ends have trees planted, the road is divided into _____ segments.

10 Robert and his friends are playing games. All children stand in a row. If Robert puts a chair between every two friends and he puts 13 chairs in total, there are _____ friends playing games.



- 11 Workers put some benches on one side of a road. They put one pot of flowers between every two benches, and put 35 pots of flowers in total. They put _____ benches.



- 12 How many times does it take to cut a piece of wood into 3 sections? If each cut takes 3 minutes, how long will it take?



- 13 How long does it take to cut 1 piece of wood into 5 sections if each cut takes 2 minutes? (Cut the wood in the same way as shown below.)



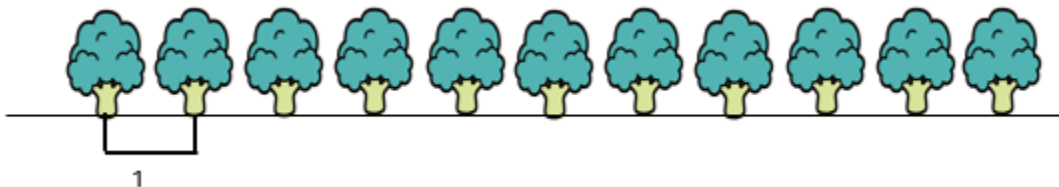
- 14 It needs _____ cuts to cut 1 piece of wood into 11 sections. If one cut takes 2 minutes, _____ minutes are needed. (Cut the wood in the same way as shown below.)



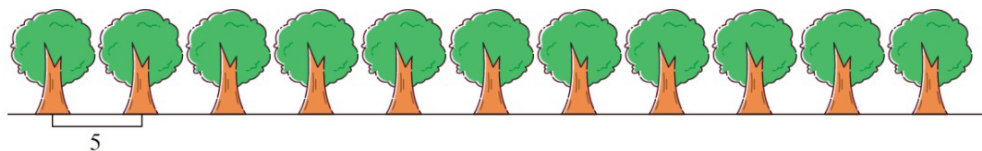
- 15 A piece of wood is 32 meters long. If each cut takes 3 minutes, how long will it take to cut the wood into pieces of 4 meters long? (Cut the wood in the same way as shown below.)



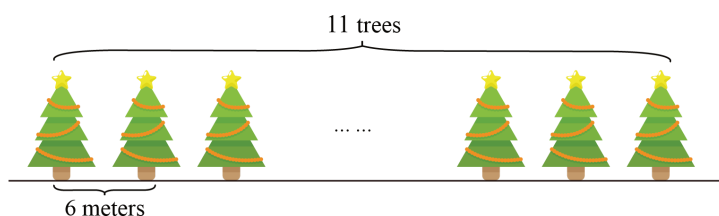
- 16 Tom plants trees on one side of the road. He plants 1 tree every 1 meter, and plants 11 trees in total. How long is the road?



- 17 Plant 1 tree every 5 meters on one side of the road, and 11 trees are planted. How long is the road?



- 18 Plant 1 tree every 6 meters on one side of the road as shown below, and 11 trees are planted. How long is the road?



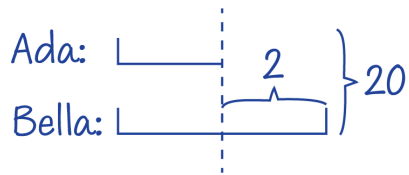
- 19 Lisa puts 25 pots of flowers every 2 meters on one side of a road. The width of the pot is negligible. It is _____ meters long from the 1st pot of flowers to the 25th pot of flowers?



Topic 6: Sum-Difference Problems

(Recommended Learning Time: 4 days)

- 1 Bella and Ada have 20 books in total. Bella has 2 more books than Ada, how many books does Bella have? How about Ada?



Subtract 2 from 20 to make Ada and Bella have the same, and the new total amount is: $20 - 2 = 18$.

Ada has $18 \div 2 = 9$ books.

Bella has $9 + 2 = 11$ books.



Draw line segments;
Subtract the extra to make the number of books of two people be the same.

- 2 Bob and Alice have 16 books in total. Bob has 2 more books than Alice, how many books does Bob have? How about Alice?

3 Kevin and Mary buy 24 boxes in total. Kevin buys 6 more boxes than Mary, how many boxes does Kevin buy? How about Mary?

4 Joy and Ross planted 30 trees in total. Joy planted 8 fewer trees than Ross, how many trees did Joy plant? How about Ross?

5 John and Nancy brought 12 apples in total. John brought 4 fewer apples than Nancy, how many apples did John bring? How about Nancy?

6 James and David make 26 pies in total. James makes 6 more pies than David, how many pies does James make? How about David?

7 Kevin and Mary buy 21 boxes in total. Kevin buys 5 more boxes than Mary, how many boxes does Kevin buy? How about Mary?

8 Bob and Alice have 18 books in total. Bob has 4 more books than Alice, how many books does Bob have? How about Alice?

9 John and Nancy brought 16 apples in total. John brought 2 fewer apples than Nancy, how many apples did John bring? How about Nancy?

10 Joy and Ross planted 32 trees in total. Joy planted 10 fewer trees than Ross, how many trees did Joy plant? How about Ross?

11 James and David make 19 pies in total. James makes 3 more pies than David, how many pies does James make? How about David?

12 There are 68 balls in total. Betty has 20 more balls than Elena, how many balls does Elena have? How about Betty?

13 There are 93 balls in total. Betty has 21 more balls than Elena, how many balls does Elena have? How about Betty?

14 Tom and Jerry buy 32 books in total. Tom buys 14 more books than Jerry, how many books does Tom buy? How about Jerry?

15 Joy and Ross planted 78 trees in total. Joy planted 8 fewer trees than Ross, how many trees did Joy plant? How about Ross?

16 James and David make 48 pies in total. James makes 6 more pies than David, how many pies does James make? How about David?

17 The sum of Sherry and her sister's age is 24. Sherry is 8 years older than her sister. How old are Sherry and her sister, respectively?

- 18 There are 16 chickens and ducks in total in the farm. There are 2 more ducks than chickens. How many ducks and chickens are there in the farm, respectively ?
- 19 There is a 12-meter pipe. We want to cut it into two sections, so that the first section is 2 meters shorter than the second section. How long are the two sections, respectively?
- 20 There are 260 peach trees and pear trees in the orchard. There are 20 more peach trees than pear trees. How many peach trees and pear trees are there, respectively?

Topic 1: Addition and Subtraction up to 1,000

(Recommended Learning Time: 4 days)

1. N/A

2. (1) 387

(2) 583

3. (1) 667

(2) 449

4. (1) 558

(2) 555

5. (1) 329

(2) 577

(3) 567

(4) 132

(5) 226

6. (1) 601

(2) 748

7.

$$\begin{array}{r}
 \begin{array}{c} 1 \\ 3 \end{array} \begin{array}{c} 1 \\ 8 \end{array} \begin{array}{c} 6 \\ 6 \end{array} \\
 (1) 535, \quad + \quad \begin{array}{c} 1 \\ 1 \end{array} \begin{array}{c} 4 \\ 4 \end{array} \begin{array}{c} 9 \\ 9 \end{array} \\
 \hline
 \begin{array}{c} 5 \\ 5 \end{array} \begin{array}{c} 3 \\ 3 \end{array} \begin{array}{c} 5 \\ 5 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \begin{array}{c} 1 \\ 3 \end{array} \begin{array}{c} 1 \\ 4 \end{array} \begin{array}{c} 5 \\ 5 \end{array} \\
 (2) 634, \quad + \quad \begin{array}{c} 2 \\ 2 \end{array} \begin{array}{c} 8 \\ 8 \end{array} \begin{array}{c} 9 \\ 9 \end{array} \\
 \hline
 \begin{array}{c} 6 \\ 6 \end{array} \begin{array}{c} 3 \\ 3 \end{array} \begin{array}{c} 4 \\ 4 \end{array}
 \end{array}$$

8. (1) 121

(2) 265

(3) 454

(4) 644

9. (1) 381

(2) 450

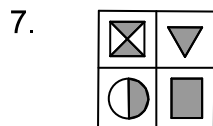
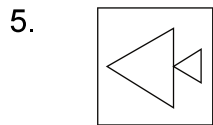
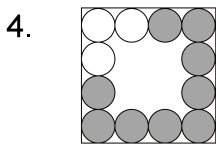
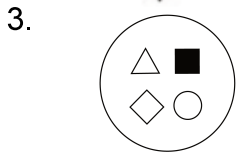
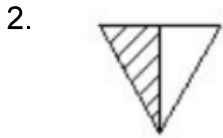
(3) 723

10. (1) 217
(2) 393
11. (1) 365
(2) 800
12. (1) 891
(2) 680
(3) 941
13. (1) 16
(2) 230
(3) 333
14. (1) 297
(2) 174
15. (1) 19
(2) 458
16. (1) 53
(2) 108
(3) 519
17. (1) 22
(2) 239
(3) 124
18. (1) 7; 3.
(2) 4; 5.
19. (1) 8; 3.
(2) 2; 7.

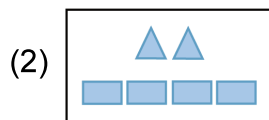
Topic 2: Find the Pattern

(Recommended Learning Time: 3 days)

1. N/A



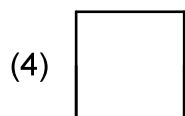
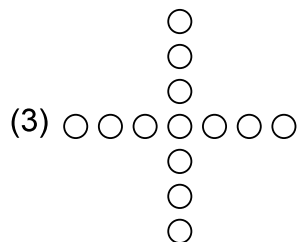
8. (1) $\triangle$ $\bigcirc$ $\square$ $\square$



9. 3

10. (1) $\star$; $\star$; $\triangle$

(2) $\bigcirc$; $\bigcirc$; $\triangle$



11.     (from left to right)

12. (1)   

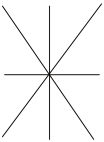
(2) *DEABC*

13. 4

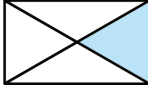
14.    

15. (1) 

(2) 

16. 

17. (1) (1) 

(2) (2) 

Topic 3: Operation without Numbers

(Recommended Learning Time: 3 days)

1. N/A

2. 3 ; 5

3. 15 ; 13

4. 3; 2; 1

5. 6 ; 4

6.

 = (11)

 = (4)

 = (2)

 = (5)

7. 9; 6; 7

8. star = 5, triangle = 10, square = 20.

9. 66 ; 26 ; 4

10. 6 ; 24 ; 50

11. rabbit = 8 kg, dog = 4 kg.

12. blue flower = 3, red flower = 9.

13. 12

14. one star = 1

one diamond = 3

one square = 9

15. 3; 12

16. (1) 8; 4

(2) 32; 8

17. (1) 8; 5

(2) 15; 5

18. 3; 4

Topic 4: Perimeter

(Recommended Learning Time: 3 days)

1. N/A
2. D
3. 22
4. 240
5. 12
6. 12 ; 12
7. 18 ; 20
8. (1) 44
(2) 48
9. 18 ; 12
10. 50 ; 128
11. 30 ; 28
12. 26 ; 20
13. 38 ; 24
14. 14 ; 16
15. A
16. 40
17. A
18. 44

Topic 5: Intervals

(Recommended Learning Time: 4 days)

1. N/A
2. 4
3. 4 ; 7 ; 12
4. 16
5. 21
6. 33
7. 9
8. 16
9. 21
10. 14
11. 36
12. 2 times, 6 minutes
13. 8
14. 10 ; 20
15. 21
16. 10 meters
17. 50
18. 60
19. 48

Topic 6: Sum-Difference Problems

(Recommended Learning Time: 4 days)

1. N/A
2. 9; 7.
3. 15; 9.
4. 11; 19.
5. 4; 8.
6. 16; 10.
7. 13; 8.
8. 11; 7.
9. 7; 9.
10. 11; 21.
11. 11; 8.
12. 24; 44
13. 36; 57
14. 23; 9.
15. 35; 43
16. 27; 21
17. Sherry is 16 years old, her sister is 8 years old.
18. There are 9 ducks and 7 chickens.
19. The first section is 5 meters, and the second section is 7 meters.
20. There are 140 peach trees and 120 pear trees.



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