Contents

Date:

sample

🔧 **Study the figures on the left. Fill in the blanks.**

1.
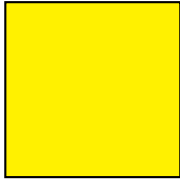
This figure is a _____ .

Properties ① _____ right angles

② _____ equal sides

2.

This figure is a _____ .

Properties ① _____ right angles

② _____ pairs of equal opposite sides

3.

This figure is a _____ .

Properties ① _____ pairs of parallel opposite sides

② _____ pairs of equal opposite sides

4.
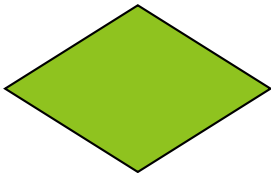
This figure is a _____ .

Properties ① _____ pairs of parallel opposite sides

② _____ equal sides

5.
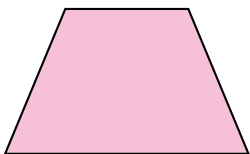
This figure is a _____ .

Property ① Only _____ pair(s) of parallel opposite sides

⚙️ **Follow the instruction to draw quadrilaterals on each squared paper.**

6. A parallelogram formed by 2 right-angled triangles.
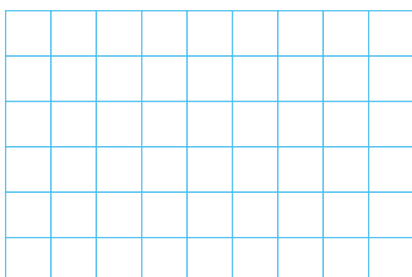
7. A square formed by 2 isosceles triangles.

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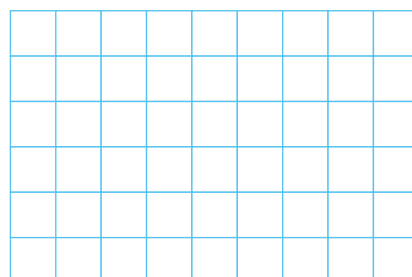
8. Study the following figures. Answer the questions.
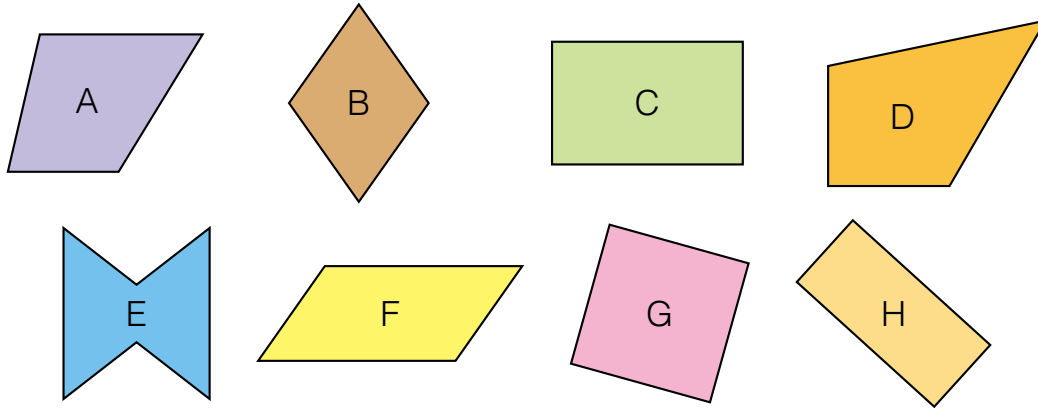
(a) Figure _____ has 4 right angles and 4 equal sides. It is a ✻ rhombus / square / rectangle . (✻ Circle the answer)

(b) Figure _____ only has 1 pair of parallel opposite sides. It is a ✻ trapezium / parallelogram / rhombus . (✻ Circle the answer)

9. Which of the following is correct? (Write the letter next to the answer in the ☐)

   A. There can be 3 right angles in a trapezium.

   B. A rectangle can be cut into two trapeziums.

   C. The upper base and the lower base of a trapezium are equal in length.

   D. Four rhombuses can form a square.

10. Which of the following is a common property of squares, rhombuses and parallelograms? (Write the letter next to the answer in the ☐)

   A. Four equal sides   B. Four equal angles

   C. No right angle   D. Two pairs of parallel opposite sides

11. The figure on the right is a rectangle formed by geo-strips. Yan pulled the geo-strips so it became a quadrilateral with a different shape. Which of the following properties does the quadrilateral have? (Write the letter next to the answer in the ☐)
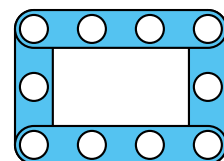
   A. Four acute angles

   B. Four right angles

   C. Four equal sides

   D. Two pairs of equal opposite angles

🔒 Exam Tips

Start with thinking about what kind of quadrilateral the new shape was.

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🔧 Do the calculations.

1.
```
    2 5 6
×     2 1
```

2.
```
    1 0 9
×     4 3
```

3.
```
    3 7 8
×     1 6
```

4. $992 \times 30 = $ _____

5. $108 \times 19 = $ _____

6. $429 \times 47 = $ _____

7. $645 \times 74 = $ _____

8. $55 \times 241 = $ _____

Note After calculating, you may use estimation to check if the answer is reasonable.

⚙️ Solve the problems. Show your working.

9. A publisher made 500 copies of *Mrs. Sheep*. How much in total can the publisher get by selling all the copies?

_____

Mrs. Sheep

$25 each

10. There were 36 boxes of eggs in a supermarket. Each box contained 128 eggs. 24 boxes of eggs were sold. How many eggs were sold?

_____

11. An educational group bought 240 entry tickets to Marine Park with a special offer. Each ticket was 36 dollars cheaper. How much cheaper in total are the tickets than the original price?

_____

12. A lap around a standard track is 400 m long. Bob runs 2 laps of the track for training every day. How many metres did he run altogether in two weeks?

_____

13. Mr. Wu bought a laptop on the right. How much in total should he pay?

Answer: He should pay _____
dollars in total.

Sales week

Pay in 12 instalments
Only $999 for each instalment

14. A shop sold 502 bottles of Shiny shampoo last month. Each bottle cost 49 dollars. Which expression below is the most suitable for estimating the total amount of money the shop earned by selling Shiny shampoo last month? (Blacken the circle next to the answer)

○ A. 40×400 ○ B. 40×500 ○ C. 50×400 ○ D. 50×500

Advanced Level

15. Which of the following options can make the expression on the right to be **smallest** and **odd**? (Write the letter next to the answer in the ☐)

A. ● = 2, ▲ = 2
B. ● = 2, ▲ = 5
C. ● = 3, ▲ = 1
D. ● = 4, ▲ = 6

$$\begin{array}{r} ●\ 4\ 7 \\ \times\ \ \ 2\ ▲ \\ \hline \end{array}$$

16. Last Sunday, there were 40 people from a youth centre who joined the Sai Kung Half-day Boat Trip. According to the information on the right, they needed to pay $ _____ altogether.

Sai Kung Half-day Boat Trip

Fee (per person) $188

For every 11 participants, 1 can enjoy the trip freely!

🔒 **Exam Tips**

First, find the number of participants who could enjoy the trip freely. Then, find the total number of participants who needed to pay and calculate the answer.

17. There are 875 Chinese books and 538 English books in a school library. If there are 13 bookshelves in the library and each bookshelf can hold 124 books, does the library have enough bookshelves for all the books? Explain.

Answer: The library ✤ has / does not have enough bookshelves. (✤ Circle the answer)

Reason: _____

_____

_____

Analysis of Common Questions in Public Exam

Calculation

（Exercise 9 – Q1）

1.
```
      1  2  8
  ×      3  2
_____
```

> **Smart Tactics**
> When performing multiplication in column form, align the digits properly and remember to add '0' in appropriate positions.

（Exercise 12 – Q6）

2. $768 \div 42 =$ _____

> **Smart Tactics**
> When performing division, note if there is any remainder. The remainder should be smaller than the divisor.

Listing

（Exercise 4 – Q10）

3. List the first four common multiples of 9 and 12.

Answer: _____

> **Smart Tactics**
> Find the L.C.M. first. The multiples of the L.C.M. are the common multiples of the two numbers.

（Exercise 17 – Q5）

4. Use ⬜**0** , ⬜**0** , ⬜**4** or ⬜**7** to form all the possible 3-digit numbers which are divisible by both 2 and 5.

Answer: _____

> **Smart Tactics**
> Think about the property of the numbers which are divisible by both 2 and 5. Then, choose the suitable digits to form the required 3-digit numbers.

Multiple choice

（Exercise 4 – Q17）

5. Which of the following pairs of numbers has 60 as their common multiple? (Blacken the circle next to the answer)

○ A. 2, 9

○ B. 3, 10

○ C. 15, 40

○ D. 60, 120

> **Smart Tactics**
> Note that common multiples of any two numbers would not be smaller than these two numbers themselves.

sample

Multiple choice (Section A)

（Exercise 5 – Q16）

1. Which of the following pairs of numbers has only 1, 3 and 9 as their common factors? (Write the letter next to the answer in the ☐)

    A. 3, 18

    B. 15, 18

    C. 18, 21

    D. 18, 27

> **Smart Tactics**
> Eliminate options with number which is not a multiple of 9 first.

（Exercise 1 – Q17）

2. The host of a TV game show distributed number cards from 50 to 99 to the audience. Among these number cards, how many of them are multiples of 5? (Write the letter next to the answer in the ☐)

    A. 8

    B. 9

    C. 10

    D. 11

> **Smart Tactics**
> For any multiple of 5, the digit in the units place is either 0 or 5. Count how many numbers from 50 to 99 with 0 or 5 in their units places there are.

（Exercise 10 – Q13）

3. If $16 \times 4 \times 10 = \blacktriangle$, then $48 \times 8 \times 25 = ?$ (Write the letter next to the answer in the ☐)

    A. $4 \times \blacktriangle$

    B. $9 \times \blacktriangle$

    C. $12 \times \blacktriangle$

    D. $15 \times \blacktriangle$

> **Smart Tactics**
> When answering this type of question, there is no need to calculate the result of the multiplication expression. Write '48 × 8 × 25' as '16 × 3 × 4 × 2 × 5 × 5'. Then, find its relation with the multiplication expression '16 × 4 × 10'.

（Exercise 7 – Q11）

4. The square on the right is cut along the dotted line to give 2 figures. Which of the following must be a property of the 2 figures? (Write the letter next to the answer in the ☐)

    A. Only one pair of parallel opposite sides

    B. Two pairs of parallel opposite sides

    C. Four right angles

    D. Only one pair of equal opposite sides

> **Smart Tactics**
> Decide the type of figures obtained after cutting. Then, choose the answer according to the properties of the figures.
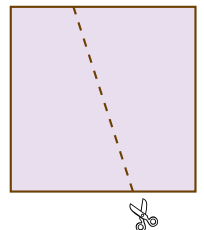
（Exercise 1 – Q18）

1. The first multiple of P is P. How many times of P is the sum of the third, the fourth and the fifth multiples of P? (Write the letter next to the answer in the ☐)

A. 9 times

B. 12 times

C. 20 times

D. 60 times

> **⚠ Mind the Trap**
>
> The question does not indicate clearly what P is. Students are easily confused and fail to find the answer.

🧩 Sorting It Out

The values of the third, the fourth and the fifth multiples of P equal 3 Ps, 4 Ps and 5 Ps respectively. Their sum is 12 Ps, i.e. 12 times of P. So, option B is the answer.

Students can also assume P as a certain number, say 10. The third, the fourth and the fifth multiples of 10 are 30, 40 and 50 respectively. Their sum is 120, i.e. 12 times of 10.

（Exercise 3 – Q15）

2. If $M = 3 \times N$, and N is not equal to 0, which of the following may NOT be correct? (Write the letter next to the answer in the ☐)

A. M is a multiple of N.

B. The factors of N are also the factors of M.

C. M is larger than N.

D. The factors of M are also the factors of N.

> **⚠ Mind the Trap**
>
> Students fail to understand the relationship between factors and multiples, and are easily confused by the symbols 'M' and 'N' in the question.

🧩 Sorting It Out

When answering this type of question, students should analyse each option to find the answer.

Option A: From the question, $M = 3 \times N$, i.e. both 3 and N are factors of M. Also, M is a multiple of 3 and N. Option A is correct.

Option B: When N is a factor of M, M is divisible by the factors of N. So, the factors of N are also the factors of M. Option B is correct.

Option C: Since $M = 3 \times N$, i.e. M is 3 times of N, option C is correct.

Option D: N may not be divisible by the factors of M, i.e. the factors of M may not be the factors of N. Option D may not be correct.

1

Fill in the ☐ with a suitable digit.

■▶ = ■ × ▶

◀■ = ◀ × ■

◀ = ▶ × 2

◀■ = ■▶ × ☐

2

Fill in the ☐ with suitable digits to make the division correct.

$$
\begin{array}{r}
3\ \square \\
1\ \square\ \overline{)\ \square\ \square\ 2} \\
\square\ 8 \\
\hline
\square\ \square \\
\square\ 2 \\
\hline
\end{array}
$$

3

The number A has 2 factors only. If A is not 5, then how many factors does the product of A × 5 have?

Answer: _____