german
math
olympiad

PAST PAPERS

Grades 3-4

1-

The units digit of a number is 3, the tens digit is 4, and the hundreds digit is 5. How much smaller is this number than 600?

A) 43 B) 47 C) 53 D) 57

2-

How many digits are in the number "seven million thirty-three thousand"**?**

A) 6

B) 7

C) 8

D) 9

3-

What is the sum of the rounded values below?

- **3687 rounded to the nearest thousand**
- **1234 rounded to the nearest hundred**
- **149 rounded to the nearest ten**

A) 4250 B) 5350 C) 5400 D) 6000

4-

A school has 750 students. 340 of them are boys and the rest are girls. If 55 girls are absent, how many girls came to school that day?

A) 360 B) 355 C) 350 D) 345

5-



A farm has 142 sheep. The number of cows is 72 fewer than the number of sheep. What is the total number of cows and sheep?

A) 356

B) 274

C) 214

D) 212

6-

24 × ▲ = 96 and 7 × ■ = 112. How many times is ■ compared to ▲?

A) 1

B) 2

C) 3

D) 4

7-

Which of the following pairs of fractions are equivalent?

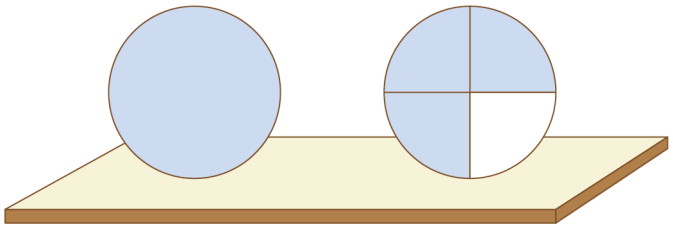
A) $\frac{1}{2}$ and $\frac{2}{5}$

B) $\frac{3}{2}$ and $\frac{9}{6}$

C) $\frac{2}{5}$ and $\frac{4}{6}$

D) None

8-



Which of the following is equivalent to the fraction modeled above?

A) $\frac{4}{7}$

B) $\frac{14}{8}$

C) $\frac{21}{8}$

D) $\frac{35}{12}$

9-

A water tank contains 480 liters of water. Mike used $\frac{1}{6}$ of it to wash the car and $\frac{7}{12}$ of it to water the garden. How many liters of water remain in the tank?

A) 120

B) 140

C) 280

D) 380

10-

4, 7, 11, 16, ?

What number should replace "?" in the sequence above?

A) 20 B) 21 C) 22 D) 23

11-

The first two terms of a Fibonacci sequence are 1 and 1. Each following term is obtained by adding the two preceding terms. What is the 12th term of this sequence?

A) 121

B) 132

C) 144

D) 159

12-

Which sequence does not increase by the same amount each time?

A) 1, 3, 5, 7, 9

B) 2, 5, 8, 11, 14

C) 4, 7, 10, 14, 19

D) 5, 10, 15, 20, 25

13-

A rectangle has a short side of 12 cm and a long side of 16 cm. What is the perimeter of this rectangle?

A) 56 cm B) 50 cm C) 48 cm D) 44 cm

14-



Pierre flew from Paris to Dubai.

The plane departed at 09:00 A.M. (Paris local time) and landed at 11:30 P.M. (Dubai local time).

Time zones:

Paris: Central European Time CET (UTC+1)

Dubai: Gulf Standard Time GST (UTC+4)

How long did the flight last?

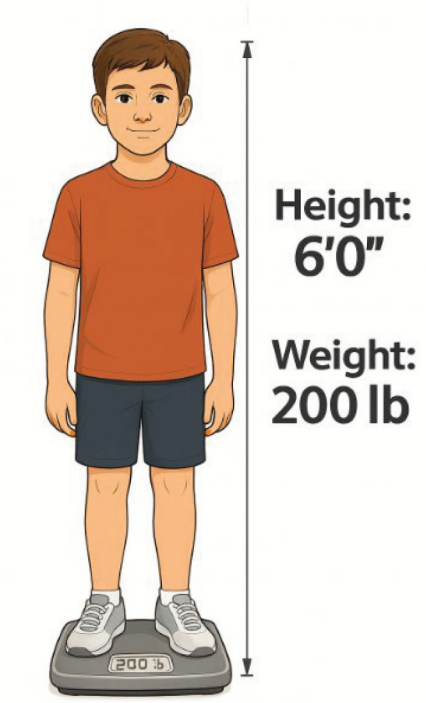
A) 10 hours 30 minutes

B) 11 hours 30 minutes

C) 12 hours 30 minutes

D) 13 hours 30 minutes

15-



Carson is 6 feet tall and has a mass of 200 pounds. What are his height in metres, rounded to the nearest hundredth, and his mass in kilograms, rounded to the nearest whole kilogram?
(1 foot=30.48 cm, 1 pound ≈ 0.4536 kg)

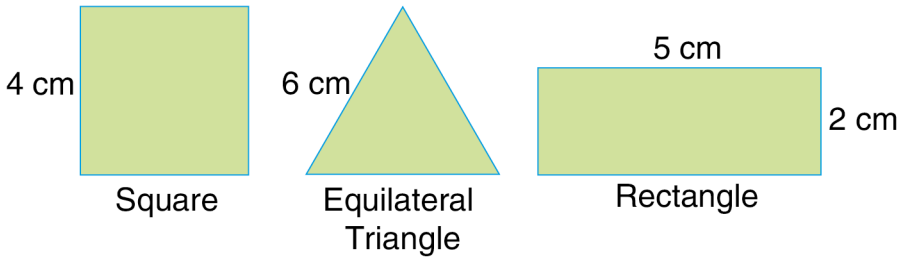
A) 1.80 m and 90 kg

B) 1.83 m and 91 kg

C) 1.85 m and 92 kg

D) 1.87 m and 93 kg

16-



Which of the following correctly shows the relationship among the perimeters of these 3 shapes?

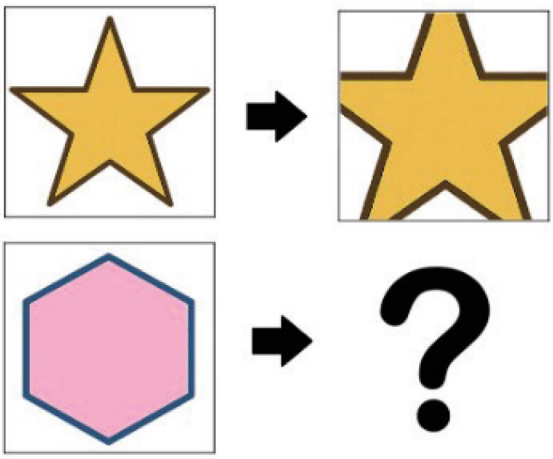
A) Square > Equilateral triangle > Rectangle

B) Rectangle > Equilateral triangle > Square

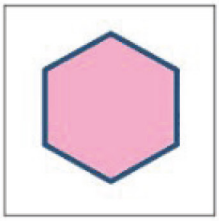
C) Equilateral triangle > Square > Rectangle

D) Rectangle > Square > Equilateral triangle

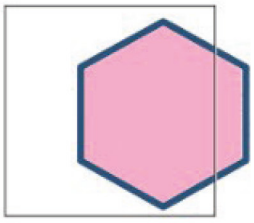
17-

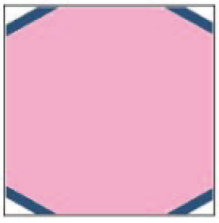


The same transformation is applied to both shapes.
Which option completes the pattern?

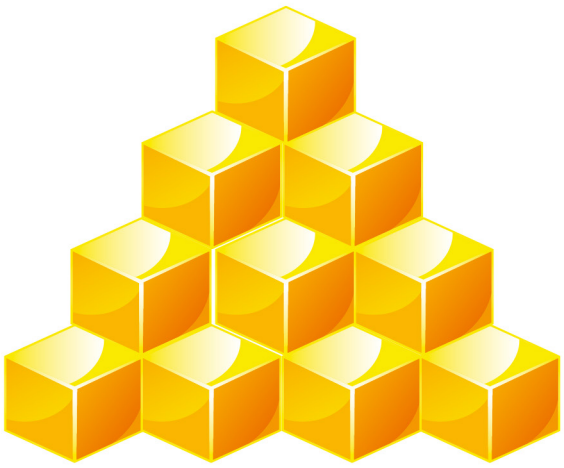
A) 

B) 

C) 

D) 

18-



The structure consists of four complete triangular layers with no gaps. How many cubes are used altogether?

A) 18 B) 20 C) 22 D) 24

19-

In a class, 10 students like mathematics the most, 7 like science the most, and 4 like music the most.
How many more students prefer mathematics or music in total than prefer science?

A) 5 B) 6 C) 7 D) 9

20-

Monday	📖📖📖📖
Tuesday	📖📖
Wednesday	📖📖📖📖📖📖
Thursday	📖📖📖
Friday	📖📖📖📖📖📖📖

Library pictograph (key: each 📖 = 4 books)
Which day shows exactly twice as many books as Thursday?

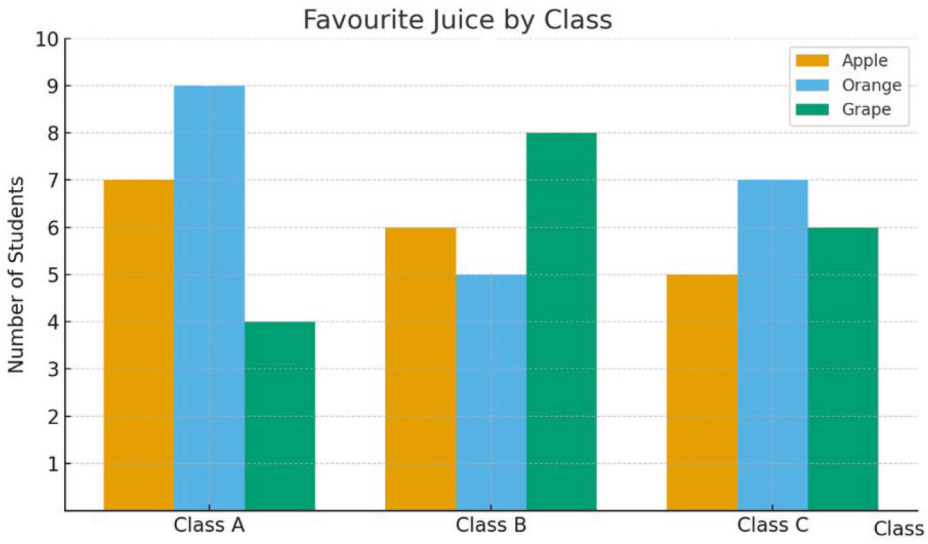
A) Monday

B) Tuesday

C) Wednesday

D) Friday

21-



Students were surveyed about their favourite juice by class. (Each student chose one.)

Which option gives us the ranking from least favourite to most overall across all three classes?

A) Apple < Orange < Grape

B) Orange < Apple = Grape

C) Grape = Apple < Orange

D) Grape < Apple < Orange

22-

Paul is taller than Noah. Noah is shorter than Henry. Who is the tallest?

A) Paul B) Noah C) Henry D) Cannot be determined

23-

In text-speak, some digits stand for sounds or whole words that are homophones in English:

- **2 → "to/too/two" (e.g., U2 → "you too")**
- **4 → "for/four" (e.g., B4 → "before")**
- **8 → "eight/-ate" (e.g., GR8 → "great")**

In the question below, three options correctly use these digit→sound substitutions to make a real English word/ phrase.

Choose the option that does NOT fit the same pattern with GR8 → 'great'

A) D8 B) SK8 C) L8 D) 8LL

24-

**Each of Hana, Iris, Jack, and Kai owns one locker,
and each locker contains equipment for a different activity.**
• Jack's locker contains the science equipment.
• Iris's locker contains the musical instrument.
**• Hana's locker contains neither the musical instrument
nor the painting supplies.**
Which locker belongs to Kai?

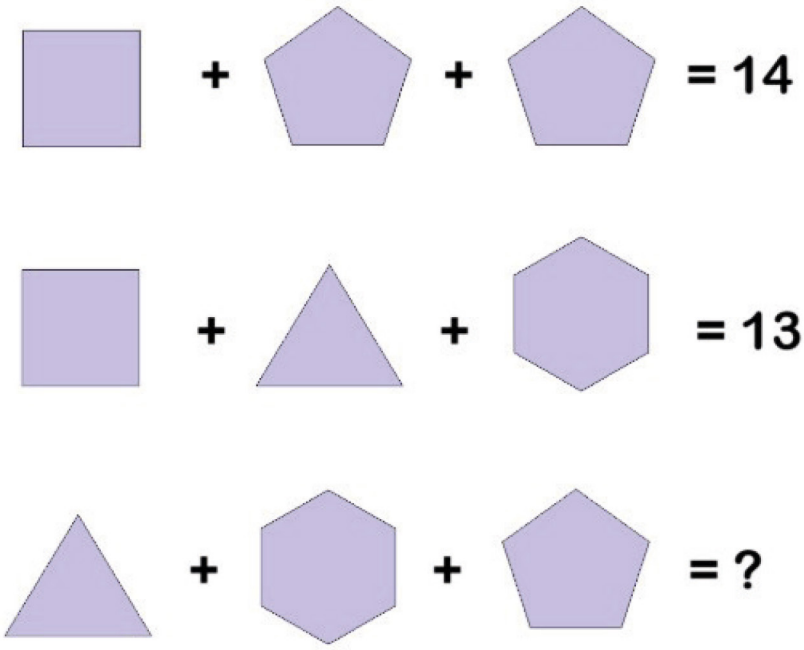


25-

**When a square paper is folded along either of its diagonals,
which geometric shape is formed?**

A) Square B) Rectangle C) Triangle D) Pentagon

26-



The two sums above follow the same rule. According to this rule, what is the value of the third sum?

A) 13 B) 14 C) 15 D) 16

27-

Complete the analogy: ◀ : ▶ : ▷ : ?

A) ◁

B) ◀

C) ▶

D) ▷

28-

In a shop, a chocolate costs 70 cents. A child buys 5 chocolates and pays €4. How much change does the child get?

A) 40 cents B) 60 cents C) 50 cents D) 70 cents

29-



Above are the totals for three recent orders:
What is the total cost of buying one doughnut, one pretzel, and one cookie?

A) $4.45

B) $4.50

C) $4.55

D) $4.60

30-



Jar A Jar B Jar C

Jar A has 4 yellow and 2 blue balls.

Jar B has 3 yellow and 3 blue balls.

Jar C has 5 yellow and 1 blue ball.

If balls are drawn from the three jars in any order, what is the minimum number of draws needed to guarantee at least one yellow ball?

A) 4

B) 5

C) 6

D) 7

Answer Key

1	D
2	B
3	B
4	B
5	D
6	D
7	B
8	B
9	A
10	C
11	C
12	C
13	A
14	B
15	B
16	C
17	D
18	B
19	C
20	C
21	C
22	D
23	D
24	D
25	C
26	B
27	A
28	C
29	C
30	C