Po Leung Kuk

1st Primary Mathematics World Contest

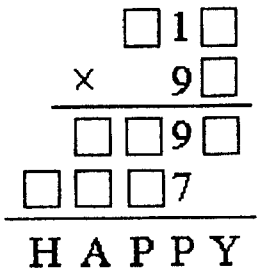
Problems for Individual Contest

Individual Contest

I1. Evaluate $29\frac{27}{28} \times 27\frac{14}{15}$.

Ans. $\mathbf{837\frac{1}{420}}$.

I2. In the multiplication on the right, each letter and each $\square$ represent a single digit. Different letters represent different digits but a $\square$ can represent any digit. What is the five-digit number "HAPPY" stands for ?



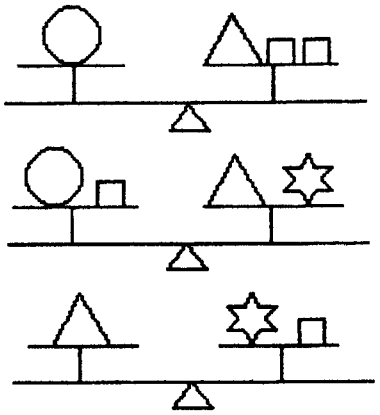
Ans. **20661.**

I3. Peter is ill. He has to take medicine A every 8 hours, medicine B every 5 hours and medicine C every 10 hours.

If he took all three medicines at 7 a.m. on Tuesday, when will he take them altogether again?

Ans. **11 p.m. Wednesday.**

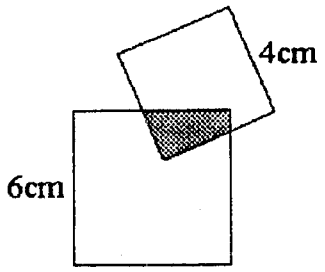
I4. Each of the three diagrams at the right shows a balance of weights using different objects.



How many □ will balance a ◯ ?

Ans. **6.**

I5. Two squares of different sizes overlapped as shown in the given figure. What is the difference between the non-overlapping areas?



Ans. **$20cm^2$.**

I6. John and Mary went to a book shop and bought some exercise books. They had $100 each. John could buy 7 large and 4 small ones. Mary could buy 5 large and 6 small ones and had $5 left. How much was a small exercise book?

Ans. **$7.50.**

I7. 40% of girls and 50% of boys in a class got 'A'. If there are only 12 students in the class got 'A's and the ratio of boys and girls in the class is 4:5, how many students are there in the class?

Ans. **27.**

I8. $997-996-995+994+993-992+991-990-989+988+987-986+.....+7-6-5+4+3-2+1=?$

Ans. **167.**

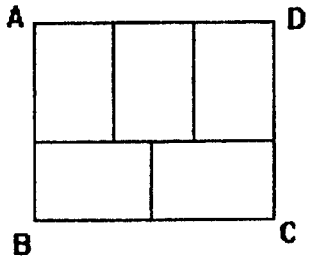
I9. . A chemist mixed an acid of 48% concentration with the same acid of 80% concentration, and then added 2 litres of distilled water to the mixed acid. As a result, he got 10 litres of the acid of 40% concentration. How many millilitre of the acid of 48% concentration that the chemist had used? (1 litre = 1000 millilitres)

Ans. **7,500.**

I10. Mary took 24 chickens to the market. In the morning she sold the chickens at $7 each and she only sold out less than half of them. In the afternoon she discounted the price of each chicken but the price was still an integral number in dollar. In the afternoon she could sell all the chickens, and she got totally $132 for the whole day. How many chickens were sold in the morning?

Ans. **6.**

I11. A rectangle ABCD is made up of five small congruent rectangles as shown in the given figure. Find the perimeter, in cm, of ABCD if its area is 6750 cm^2.



Ans. **330 cm.**

I12. In a die, 1 and 6, 2 and 5, 3 and 4 appear on opposite faces. When 2 dice are thrown, product of numbers appearing on the top and bottom faces of the 2 dice are formed as follows:

number on top face of 1st die × number on top face of 2nd die
number on top face of 1st die × number on bottom face of 2nd die
number on bottom face of 1st die × number on top face of 2nd die
number on bottom face of 1st die × number on bottom face of 2nd die

What is the sum of these 4 products ?

Ans. **49.**

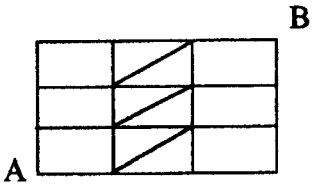
I13. A truck moved from A to B at a speed of 50 km/h and returns from B to A at 70 km/h. It travelled 3 rounds within 18 hours. What is the distance between A and B ?

Ans. 175 **km.**

I14. If we make five two-digit numbers using the digits 0, 1, 2, ..., 9 exactly once, and the product of the five numbers is maximized, find the greatest number among them.

Ans. **90.**

I15. How many paths from A to B consist of exactly six line segments (vertical, horizontal or inclined) ?



Ans. **26.**