Term 3 lesson 1

1. Find the missing number:

(2 + 4 + 6 + … + 1984) = (1 + 3 + 5 + … + 1983) + ?

1. In a quiz, each pupil had to answer 50 questions. 4 points were given for each correct answer and 2 points were deducted for each incorrect answer. Jack answered all the questions and scored 92 points. How many correct answers did Jack get?
2. Boxes A, B and C have a combined mass of 39kg. Boxes B, C and D have a combined mass of 45kg. Boxes A and D have a combined mass of 34kg, and Box A is 4kg lighter than Box B. What is the difference in mass between the heaviest and the lightest box?
3. Sarah celebrated her birthday party. She wanted to give some lollipops to a group of friends. Each friend was supposed to receive 20 lollipops. However, when 20 more students joined the group, each friend only received 12 lollipops and there were 16 lollipops left. How many friends were there at first?
4. What is the value of the 39th number in the following sequence:

1, 1, 2, 2, 3, 3, 4, 4, …..?

1. Superman flew from metropolis to Gotham city at 200 km/h (i.e. 200 km per hour). He flew back from Gotham city to metropolis at 300 km/h. What is his average speed for the round trip?
2. A 12-hour clock loses 10 minutes each day. The clock will first return to the correct time in \_\_\_\_\_\_\_\_\_\_ days?
3. Bob earned $33 in 6 days. At the same rate, in how many more days Bob’s total earnings would be $99?
4. There were 5 times as many hamsters as rabbits in a pet shop. After 6 hamsters and 6 rabbits were sold, there were 9 times as many hamsters as rabbits in the shop. How many rabbits where in the shop at first?
5. Rachel had ½ as many stamps as Ali. Ali had ¾ as many stamps as Sarah. If Rachel had 60 stamps less than Sarah, find the total number of stamps that the three children have.
6. In a list of 200 numbers, each number after the first number is 4 more than the number that comes before it. What is the difference between the first and the last number on this list?
7. In the gathering hall, there were 30 less children than adults. After 3/5 of the children and 5/8 of the adults had left the hall, there was an equal number of children and adults remained behind. How many children were in the hall at first?
8. Jan 1, 1989 was Sunday. What day is Jan 1, 1988 (a leap year)?
9. (247 x 1000) + (247 x 100) + (247 x 10) + (247 x 1) is divisible by:
10. 2 B. 3 C. 4 d. 11
11. Jay has a total of 30 pens and notebooks. If he exchanges every pen for 2 notebooks, he will have 50 notebooks. How many notebooks does Jay have at first?
12. Ali and Bob had some stamps. If Ali gave 1/3 of his stamps to Bob, he would have 240 stamps less than Bob. If Ali gave 5/6 of his stamps to Bob instead, he would have 480 stamps less than Bob. How many stamps did Ali have at first?

1 + 2 = 3

4 + 5 + 6 = 7 + 8

9 + 10 + 11 + 12 = 13 + 14 + 15

16 + 17 + 18 + 19 + 20 = 21 + 22 + 23 + 24

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What is the sum of the numbers in the 10th row?

1. Arrange these numbers (16, 3, 63, 7, 26, 37, 48, 19) into two sets of 4 numbers each, so that the difference between the sums of these numbers in each set is the smallest. What is the smallest possible difference? What numbers are in each set?
2. Alex bought 59 blue and black erasers for $152. Each blue eraser cost $2 and each black eraser cost $3. How many blue erasers did Alex buy?
3. Ali used 4 sticks to make a square and 6 sticks to make a hexagon. In total, he used 50 sticks to make 5 more squares than hexagons. How many squares did he make?
4. A + B + C + C = 96, C + A + A + A = 92, B + B + B + C = 140. What is the value of B?
5. In a class of 27 students, the average score of the boys in a test was 92. If the average score of the 12 girls in the class was 83, what is the average score of the whole class?
6. A school has between 500 and 600 students. They can be allocated into Math classes of exactly 18 students each. They can also be allocated into English classes of exactly 24 students each and allocated into groups of 28 students each for an excursion. How many groups will there be if they are allocated into groups of 21 students each?
7. There are 21 prefects attending the tea-reception. By the end of the evening, every prefect had been formally introduced to the President, and every prefect present had shaken hands with every other person. How many handshakes took place?
8. Which number replaces the question mark?

3, 9, 17, 27, ?

1. Mike can paint a picture in 2 hours. Ben can paint the same picture in 4 hours. Carl can paint the same picture in 3 hours. Daniel can paint the same picture in 6 hours. If they all worked together at their own speed to paint one picture, how long would it take for them to complete the picture?
2. A swimming pool can be filled by an inlet pipe in 12 hours and emptied by an outlet pipe in 15 hours. How long will it take to fill up the pool with both pipes turned on?
3. How many squares are there in a 4 x 4 chess board?
4. A container is unloaded by 9 men in 24 minutes. How long would it take for 12 men to unload the container?
5. 3 bus services operate from the same depot. The first service leaves at every 10 minutes intervals, the second leaves at every 15 minutes intervals, and the third at every 25 minutes intervals. All 3 services leave the depot together at 0800. What would be the next time the 3 bus services next leave the depot together?