Thinking Problems for KS3

Set 1

QUESTION 1

Jane is older than Kim.
Kim is older than Shawn.
Shawn is younger than Jane.
Rachel is older than Jane

List the people from oldest to youngest.

QUESTION 2

A ball is dropped from a height of 125m. Each time it hits the ground it bounces 3/5 of the height it fell.

How high will the ball bounce on the 3rd bounce?

QUESTION 3

What is the four-digit number in which the first digit is one-third the second, the third is the sum of the first and second, and the last is three times the second?

QUESTION 4

In the first year of production a play sells 1572 tickets, in its second year it sells 1753 tickets, in its third year it sells 152 less than in its second year. How many tickets are sold in 3 years?

QUESTION 5

Add up all the numbers on the telephone dial, and then multiply that sum by every number on the telephone dial. What do you get?

QUESTION 6

Replace each blank with the correct digit.

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 43_2
  42_
+ _127
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 8893
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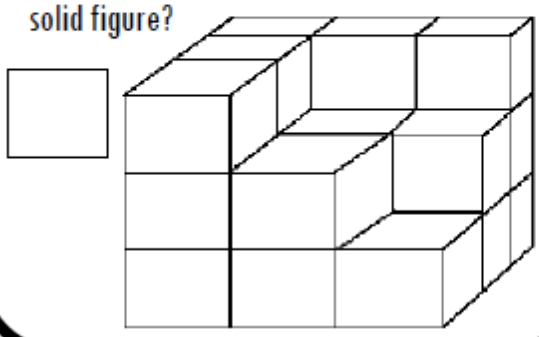
Hackney

QUESTION 7

How many cubes are needed to build this solid figure?



QUESTION 8

You bought 2 antique lamps for £50 each. Later, you were offered £60 for one and sold it. Then you changed your mind when you saw another such lamp being sold for more, and bought it back for £70. You then sold it for £80. The 2nd one didn't sell at all, so you reduced it to 10% of what you paid for it and finally managed to get rid of it. Overall, how much money did you make or lose?

QUESTION 9

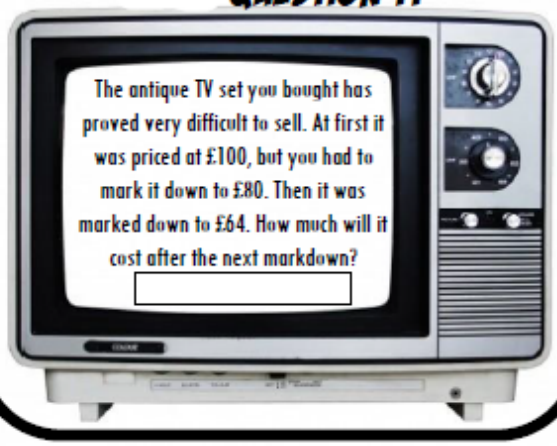
Place the digits 9, 4, 7, 6, 5, 1, in the boxes in order to get the largest result.

(□□ x □□) + (□ x □) = ?

QUESTION 10

John was having a hard time lining up his tin soldiers. He didn't have that many (fewer than a hundred) but he couldn't seem to arrange them in parade properly. He kept having numbers left over. He tried rows of 5 and there were 4 left over – rows of 6, 4 left over – rows of 7, 1 left over. He finally decided to have a very narrow parade and arranged them in rows of 4. This time it worked. What's the smallest number of tin soldiers he could have?

QUESTION 11



QUESTION 12

Linda didn't like to tell her age, so when she was asked, her mother answered for her. Her mother said, "I'm just seven times as old as she is now. In twenty years, she will be just half the age that I will be then."

How old is clever little Linda?

QUESTION 13

I stroll daily at 2 miles an hour. My jogger friend, however, has worked to change this, saying, "Why don't you jog? You'd cover the same 12-mile distance, and you'd save a lot of time." I notice that he jogs exactly 3 times as fast as I stroll. How much time will I save if I jogged with him?

QUESTION 14

Using the number 987654321 and seven addition signs we can make 99:

9+8+7+65+4+3+2+1 = 99

Can you use 987654321 and six addition signs to make 99?

QUESTION 15

Divide the clock face into **3** parts with **2** lines so that the sum of the numbers in the three parts are equal.

QUESTION 16

The local sweety shop sold large packets of sweets for 25p and small packets for 10p. The new cashier wasn't up to the job, though; she marked down the number of sacks she sold, but forgot to record their prices. At the end of the day, she found she had sold 385 packs of sweets and had £62.65 in her cash register. Fortunately, she figured out how many of each size of packs of sweets she had sold before her boss came by. Can you?