

# 2009 MathEdge+ Contest: JumpStart Level

10 problems in 30 mins. No Calculator.

Please box the answer. Only correct answer counts. No partial credit.

1) What is the value of

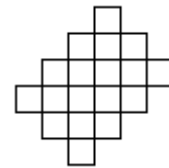
$$1 - 2 + 3 - 4 + 5 - 6 + 7 - 8 + 9 - 10 + 11 - 12 + 13 = ?$$

2) Which four beads below need to be added to this string:



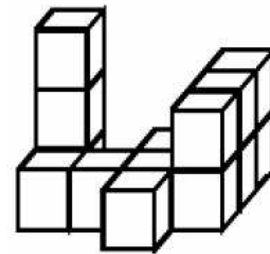
- A) B) C) D) E)

3) From which of the figures below the figure to the left was cut out?

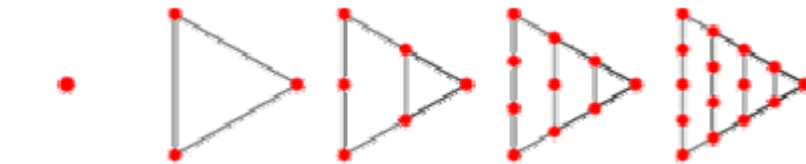


- A) B) C) D) E)

4) How many blocks were used to build the following figure?

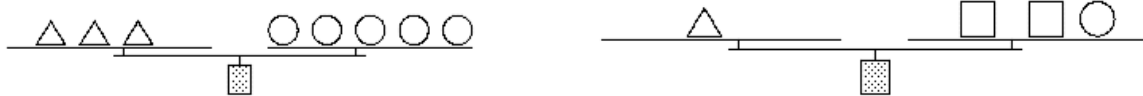


5) How many dots will be in the 10<sup>th</sup> figure:



- Figure 1: 1 dot      Figure 2: 3 dots      Figure 3: 6 dots      Figure 4:      Figure 5:      ...      Figure 10: ? dots

6) In the diagram below, two equal-armed balances are shown. How many □s would it take to balance one O?

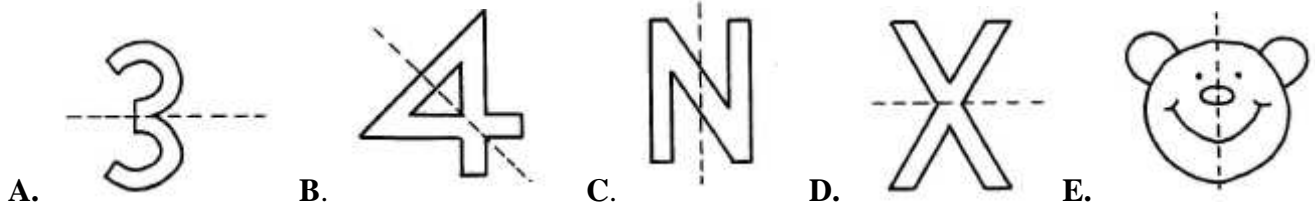


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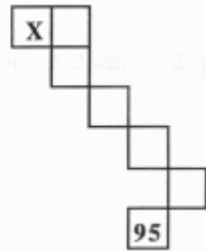
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7) In which picture is the dashed line not a line of symmetry?

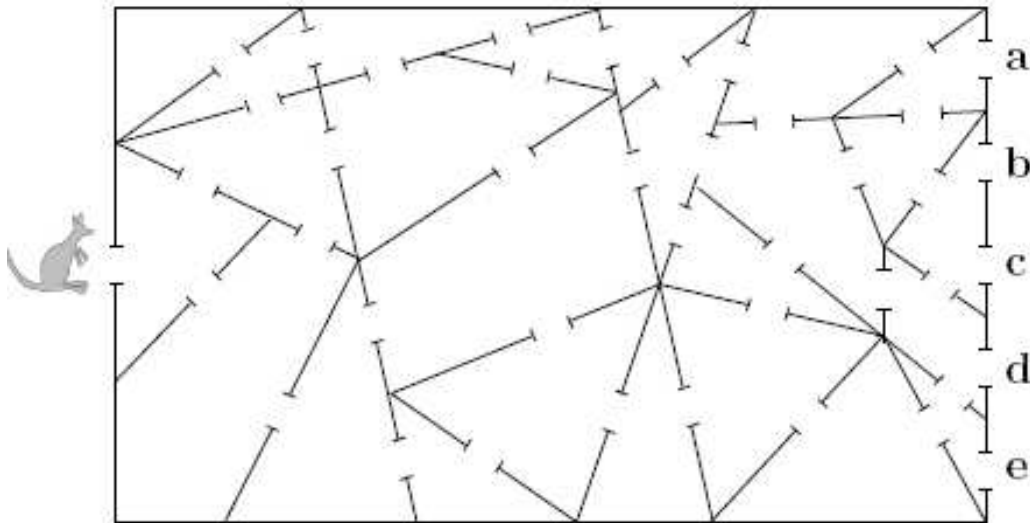


8) Below is the start of a 100 chart. Also shown is a part of the chart (which has been enlarged). Determine what number should go in the square marked with an X.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40



9) A kangaroo enters the building as shown in the picture. He only passes through triangular rooms. Where does he leave the building?



10)

If:  $2 \blacklozenge 5 = 8$                       find  $11 \blacklozenge 15$   
 $3 \blacklozenge 7 = 11$   
 $4 \blacklozenge 5 = 10$   
 $6 \blacklozenge 12 = 19$

Note:  $\blacklozenge$  means "when combined in a special way with."