

**1986 Q11**

11. If  $A*B$  means  $\frac{A+B}{2}$ , then  $(3*5)*8$  is

- A) 6    B) 8    C) 12    D) 16    E) 30

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**1998 Q11**

11. Harry has 3 sisters and 5 brothers. His sister Harriet has  $S$  sisters and  $B$  brothers. What is the product of  $S$  and  $B$ ?

- (A) 8    (B) 10    (C) 12    (D) 15    (E) 18

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**2001 Q12**

12. If  $a \otimes b = \frac{a+b}{a-b}$ , then  $(6 \otimes 4) \otimes 3 =$

- (A) 4    (B) 13    (C) 15    (D) 30    (E) 72

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**2010 Q13**

13. The lengths of the sides of a triangle measured in inches are three consecutive integers. The length of the shortest side is 30% of the perimeter. What is the length of the longest side?

- (A) 7    (B) 8    (C) 9    (D) 10    (E) 11

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**2014 Q13**

13. If  $n$  and  $m$  are integers and  $n^2 + m^2$  is even, which of the following is impossible?
- (A)  $n$  and  $m$  are even      (B)  $n$  and  $m$  are odd      (C)  $n + m$  is even  
(D)  $n + m$  is odd      (E) none of these is impossible

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**1988 Q14**

14.  $\diamond$  and  $\Delta$  are whole numbers and  $\diamond \times \Delta = 36$ . The largest possible value of  $\diamond + \Delta$  is
- A) 12      B) 13      C) 15      D) 20      E) 37