

# NUMBER SENSE TIPS (SEPTEMBER 2019)

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1.  $324 \times 18 = \underline{\hspace{2cm}}$ .

Moving from left to right, multiply each digit by 8 and add the digit to the right.

Step #1 :  $8(4) + 0 = 32$  (2 is the ones digit.) Carry 3 to Step #2.

Step #2 :  $8(2) + 4 + 3 = 23$  (3 is the tens digit.) Carry 2 to Step #3.

Step #3 :  $8(3) + 2 + 2 = 28$  (8 is the hundreds digit.) Carry 2 to Step #4

Step #4 :  $8(0) + 3 + 2 = 5$

Answer : 5832

2.  $(1991 \times 9 + 81) \div 3 = \underline{\hspace{2cm}}$ .

$[(2000 - 9) \times 9 + 81] \div 3$

$(18000 - 81 + 81) \div 3 = 18000 \div 3 = 6000$

3. The larger root of  $(x - 2)^2 = 1/16$  is  $\underline{\hspace{2cm}}$ .

$|x - 2| = 1/4$

$x - 2 = 1/4$  or  $x - 2 = -1/4$

$x = 2 1/4$  or  $x = 1 3/4$

Answer :  $2 1/4$

4. If  $20^5 \div 16 = (4^x)(5^y)$ , then  $x + y = \underline{\hspace{2cm}}$ .

$$\frac{(4)^5(5)^4}{4^2} = (4^3)(5^4)$$

$$x = 3 \text{ and } y = 5 ; x + y = 3 + 5 = 8$$

5. If  $x < 0$  and  $|3x + 2| = 4$ , then  $x = \underline{\hspace{2cm}}$ .

$$3x + 2 = 4 \text{ or } 3x + 2 = -4$$

$$3x = 2 \text{ or } 3x = -6$$

$$x = 1.5 \text{ or } x = -2$$

Answer : -2