

A Christmas Message

Solve each problem below and then use the following table to decode the Christmas message:

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
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Solve the problems in each column; words are separated by the dashed lines.

Let's say goodbye to 2020 by solving 150 math problems using the digits 2, 0, 2, 0 in that order.

Symbols used: * is multiplication, sqrt is square root, ! is factorial, [] is the greatest integer, ^ is exponent.

<p>___ . $20 + 2 * 0$</p> <p>___ . $(2 + (0)!)! + 2 + 0$</p> <p>___ . $20 - 2 + 0$</p> <p>___ . $2 + 0 + 2 + (0)!$</p> <p>___ . $[\text{sqrt}(20)] + 2^{\wedge}0$</p> <p>-----</p> <p>___ . $20 + 2 + (0)!$</p> <p>___ . $20 / 2 - (0)!$</p> <p>___ . $20 - 2 + (0)!$</p> <p>___ . $2 + 0 + 2 + (0)!$</p> <p>-----</p> <p>___ . $20 + 2 + (0)!$</p> <p>___ . $[(\text{sqrt}(202))] + 0!$</p> <p>___ . $(2 + (0)!)! * 2 + (0)!$</p> <p>___ . $[\text{sqrt}(20)] + 2^{\wedge}0$</p> <p>___ . $20 - (2 + (0)!)!$</p> <p>-----</p> <p>___ . $20 + 2 + (0)!$</p> <p>___ . $[(\text{sqrt}(202))] + 0!$</p> <p>___ . $20 + 2 - (0)!$</p> <p>___ . $(2 + (0)!)! + (2 + (0)!)!$</p> <p>___ . $2 * 0! + 2 * 0!$</p> <p>-----</p> <p>___ . $[\text{sqrt}(20)] + [\text{sqrt}(20)]$</p> <p>___ . $20 / 20$</p> <p>___ . $20 + 2 + 0$</p> <p>___ . $[\text{sqrt}(20)] + 2^{\wedge}0$</p> <p>-----</p> <p>___ . $2 * 0 + 2^{\wedge}0$</p> <p>___ . $20 - 2 + (0)!$</p> <p>___ . $20 / 2 + (0)!$</p> <p>___ . $2 * 0! + 2 + (0)!$</p> <p>___ . $2 * 0! + 2 * 0!$</p> <p>-----</p>	<p>___ . $2 + 0 + 2 * 0!$</p> <p>___ . $[\text{sqrt}(20)] * 2 + 0!$</p> <p>___ . $20 - 2 * 0!$</p> <p>___ . $2 + 0 + 2 + (0)!$</p> <p>___ . $2 + (0)! + 2 * 0$</p> <p>___ . $20 / (2^{\wedge}0)$</p> <p>___ . $[\text{sqrt}(20)] * 2 + 0!$</p> <p>___ . $[(\text{sqrt}(202))] + 0!$</p> <p>___ . $\text{int}(\text{sqrt}(202)) + 0$</p> <p>___ . $20 - 2 + (0)! ,$</p> <p>-----</p> <p>___ . $2 * 0 + 2^{\wedge}0$</p> <p>___ . $20 - 2 + 0$</p> <p>___ . $20 - 2 * 0!$</p> <p>___ . $20 / 2 - (0)!$</p> <p>___ . $20 + 2 * 0!$</p> <p>___ . $[\text{sqrt}(20)] + 2^{\wedge}0$</p> <p>___ . $2 * 0 + [\text{sqrt}(20)]$</p> <p>-----</p> <p>___ . $[(\text{sqrt}(202))] + 0!$</p> <p>___ . $20 - (2 + (0)!)!$</p> <p>-----</p> <p>___ . $20 / (2^{\wedge}0)$</p> <p>___ . $20 / 2 - (0)!$</p> <p>___ . $[\text{sqrt}(202)] - 0!$</p> <p>___ . $[\text{sqrt}(20)] + 2^{\wedge}0 ,$</p> <p>-----</p> <p>___ . $(2 + (0)!)! + 2 * 0!$</p> <p>___ . $2 * 0! + 2 + (0)!$</p> <p>___ . $(2 + 0)! * 2 + 0$</p> <p>___ . $2^{\wedge} (0! + 2 + 0)!$</p> <p>___ . $[\text{sqrt}(20)] + 2^{\wedge}0$</p> <p>___ . $2 + 0 + 2 * 0!$</p> <p>-----</p>	<p>___ . $2 * 0! + 2 + 0$</p> <p>___ . $2 * 0! + 2 + (0)!$</p> <p>___ . $[\text{sqrt}(20)] * (2 + 0)!$</p> <p>___ . $[\text{sqrt}(20)] * 2 + 0!$</p> <p>___ . $20 + 2 * 0!$</p> <p>___ . $[\text{sqrt}(20)] + 2^{\wedge}0$</p> <p>___ . $20 - 2 + 0$</p> <p>-----</p> <p>___ . $20 / (2^{\wedge}0)$</p> <p>___ . $(2 + (0)!)! + 2 + 0$</p> <p>___ . $[\text{sqrt}(20)] + 2^{\wedge}0$</p> <p>-----</p> <p>___ . $2 + 0 * 20$</p> <p>___ . $(202)^{\wedge}0$</p> <p>___ . $2 + 0 + 2 * 0$</p> <p>___ . $(2 + 0 + 2)! + (0)! ,$</p> <p>-----</p> <p>___ . $2^{\wedge}0 + 2^{\wedge}0$</p> <p>___ . $[(\text{sqrt}(202))] + 0!$</p> <p>___ . $20 + 2 - (0)!$</p> <p>___ . $(2 + 0)! + 2 - 0!$</p> <p>___ . $(2 + (0)!)! + 2 + 0$</p> <p>___ . $20 / (2^{\wedge}0)$</p> <p>-----</p> <p>___ . $2^{\wedge} (0! + 2 + 0)!$</p> <p>___ . $20 - 2 + 0$</p> <p>___ . $20 / 20$</p> <p>___ . $2 + (0)! + 2 * 0$</p> <p>___ . $20 + 2 * 0$</p> <p>___ . $20 / 2 - (0)!$</p> <p>___ . $2 + 0 + 2^{\wedge}0$</p> <p>___ . $2^{\wedge}0 * 2^{\wedge}0$</p> <p>___ . $(2 + 0)! * 2 + 0$</p> <p>-----</p>
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After solving all the problems in the three columns on page one, solve the problems in the three columns on this page.

__. $(2 + (0)!)! + (2 * 0)!$
 __. $[\text{sqrt}(20)] * 2 + 0!$
 __. $2 + (0)! + 2 + (0)!$
 __. $20 + 2 * 0$
 __. $20 - 2 + (0)! ,$

__. $2 + (0)! + 2 * 0$
 __. $[\text{sqrt}(20)] * (2 + 0)!$
 __. $[\text{sqrt}(20)] + 2 - 0!$
 __. $20 / 20$
 __. $[\text{sqrt}(202)] + 0$
 __. $[\text{sqrt}(20)] + 2^0$
 __. $2 + 0! + 2^0$

__. $20 / (2^0)$
 __. $[\text{sqrt}(20)] + [\text{sqrt}(20)]$
 __. $2 + 0 + 2 + (0)!$

__. $20 - 2 + (0)!$
 __. $20 / (2^0)$
 __. $2 * 0 + 2^0$
 __. $2 + 0 * 2^0$
 __. $(2 + (0)!)! + (2 + (0)!)!$
 __. $[\text{sqrt}(20)] + 2^0 ,$

__. $(2 + (0)!)! * 2 + (0)!$
 __. $2 * 0 + 2^0$
 __. $2 + 0 + 2 + 0$
 __. $[\text{sqrt}(20)] + 2^0$

__. $(202)^0$

 __. $(2 + (0)! + 2 * 0$
 __. $(2 + 0) / 2 - 0$
 __. $20 - 2 + (0)!$
 __. $20 - 2^0$
 __. $[\text{sqrt}(20)] + 2^0$
 __. $20 - 2 * 0!$
 __. $[\text{sqrt}(\text{sqrt}(\text{sqrt}(\text{sqrt}(20!)))) + 2 - 0!]$

__. $(2 + (0)!)! + (2 + (0)!)!$
 __. $[\text{sqrt}(20)] + 2^0 ,$

__. $(202)^0$
 __. $[(\text{sqrt}(202))] + 0$
 __. $2 + 0 + 2 + 0$

 __. $20 / (2^0)$
 __. $[\text{sqrt}(20)] + [\text{sqrt}(20)]$
 __. $2 + 0 + 2 + (0)!$
 __. $20 - 2 + 0$
 __. $[\text{sqrt}(20)] + 2^0$

__. $20 + 2 + (0)!$
 __. $[(\text{sqrt}(202))] + 0!$
 __. $20 + 2 - (0)!$
 __. $[\text{sqrt}(20)] * (2 + 0)!$
 __. $2 + 0 + 2 + 0$

__. $2 - 0! + 2^0$
 __. $2 + 0! + 2 - 0$

 __. $[\text{sqrt}(20)] * [\text{sqrt}(20)]$
 __. $[\text{sqrt}(20)] + 2^0$
 __. $(202)^0$
 __. $2 + 0 + 2^0$
 __. $2 + 0 + 2 + (0)!$

__. $[(\text{sqrt}(202))] + 0!$
 __. $20 - (2 + (0)!)!$

__. $2 + 0 + 2 + (0)!$
 __. $20 / 20$
 __. $20 - 2 + 0$
 __. $20 + 2 * 0$
 __. $(2 + (0)!)! + 2 + 0$

Now using the table on page one, write your answers in order in the spaces below to find your Christmas message:

_____,
 _____,
 _____,
 _____,
 _____ !

Merry Christmas from Mr. P