

warm up back of p. 27

$$4 - 5(3 + 4)$$

$$4 - 5(7)$$

$$4 - 35$$

$$\textcircled{-31}$$

$$(6 - 4)^2 + 4 \cdot 3$$

$$2^2 + 4 \cdot 3$$

$$4 + 4 \cdot 3$$

$$4 + 12$$

$$\textcircled{16}$$

$$\begin{array}{r} 5 \\ 1 \quad + 4 \\ 3 - 2 + 4 \\ \hline \end{array}$$

$$2^2 + 1$$

$$4 + 1$$

$$5$$

$$\frac{5}{5}$$

$$\textcircled{1}$$

What Kind of TV Show Is Relaxing To Watch?


Simplify each expression, write your answer, then mark it in the answer columns. For each set of exercises, there is one extra answer. Write the letter of this answer in the corresponding box at the right.

2	6	4	8	1	5	7	3
A	S	I	T	C	A	L	M

1	<p>a. $10 + 6 \div 2$ 13 <input type="radio"/> N 8</p> <p>b. $(10 + 6) \div 2$ 8 <input type="radio"/> O 18</p> <p>c. $30 - 3 \cdot 4$ 18 <input type="radio"/> R 13</p> <p>d. $(30 - 3) \cdot 4$ 108 <input type="radio"/> C 10</p> <p style="text-align: right;"><input type="radio"/> D 108</p>
2	<p>a. $3 \cdot 8 + 7$ 31 <input type="radio"/> A 54</p> <p>b. $3(8 + 7)$ 45 <input type="radio"/> G 45</p> <p>c. $10 \cdot 3^2 - 4$ 86 <input type="radio"/> P 10</p> <p>d. $\frac{20 + 30}{12 - 7} - \frac{56}{5}$ 10 <input type="radio"/> C 31</p> <p style="text-align: right;"><input type="radio"/> E 86</p>
3	<p>a. $50 + 24 \div 6 \cdot 2$ 58 <input type="radio"/> B 58</p> <p>b. $50 + 24 \div (6 \cdot 2)$ 52 <input type="radio"/> R 24</p> <p>c. $17 - (5 \cdot 4 \div 2)$ 7 <input type="radio"/> M 16</p> <p>d. $(17 - 5) \cdot 4 \div 2$ 24 <input type="radio"/> V 52</p> <p style="text-align: right;"><input type="radio"/> J 7</p>
4	<p>a. $5 \cdot 6 + 9 \cdot 4$ 66 <input type="radio"/> F 6</p> <p>b. $60 - 2^3 \cdot 5$ 20 <input type="radio"/> I 7</p> <p>c. $\frac{9}{12} + \frac{12}{4}$ 6 <input type="radio"/> U 66</p> <p>d. $\frac{9 + 12}{3 + 4} - \frac{21}{7}$ 3 <input type="radio"/> K 3</p> <p style="text-align: right;"><input type="radio"/> N 20</p>
5	<p>a. $4 + 5^2$ 29 <input type="radio"/> L 81</p> <p>b. $(4 + 5)^2$ 81 <input type="radio"/> O 24</p> <p>c. $32 - 16 \div 4 \cdot 2$ 24 <input type="radio"/> A 11</p> <p>d. $(32 - 16) \div (4 \cdot 2)$ 2 <input type="radio"/> E 2</p> <p style="text-align: right;"><input type="radio"/> R 29</p>
6	<p>a. $30 - [9 + 4(8 - 5)]$ 9 <input type="radio"/> P 66</p> <p>b. $11 - 3^2 + (11 - 3)^2$ 66 <input type="radio"/> V 32</p> <p>c. $\frac{10^2}{5} - \frac{6^2}{3}$ 8 <input type="radio"/> N 8</p> <p>d. $\frac{10^2 - 6^2}{5 - 3}$ 32 <input type="radio"/> G 9</p> <p style="text-align: right;"><input type="radio"/> S 58</p>
7	<p>a. $2[5 + 2(8 - 6)]$ 18 <input type="radio"/> R 18</p> <p>b. $3[20 - 4(2 + 1)]$ 24 <input type="radio"/> L 115</p> <p>c. $6 + 4^3 - 1^8$ 69 <input type="radio"/> D 69</p> <p>d. $(6 + 4)^3 - 1^8$ 999 <input type="radio"/> E 999</p> <p style="text-align: right;"><input type="radio"/> W 24</p>
8	<p>a. $\frac{13 + 7^2 \div 7}{9 - 20 \div 4 + 16}$ 1 <input type="radio"/> N 25</p> <p>b. $15 + (2^5 - 7) \cdot 3$ 90 <input type="radio"/> R 90</p> <p>c. $\frac{36}{2} + \frac{3 \cdot 21}{11 - 2}$ 75 <input type="radio"/> X 9</p> <p>d. $\frac{36 + 3 \cdot 21}{2 + 11 - 2}$ 9 <input type="radio"/> T 22</p> <p style="text-align: right;"><input type="radio"/> S 1</p>

Name:	Date:
Topic:	Class:

Main Ideas/Questions	Notes/Examples	
Key Words & Phrases x^2 Squared x^3 Cubed	ADDITION + • all together • Sum • total • combine • plus • more than • increased by	SUBTRACTION - • take away • difference • minus • decreased • less than
	MULTIPLICATION • • product • times • twice • multiply by • double / triple • repeating	DIVISION / • quotient • divided by • separated • grouped / into


 "TURN AROUND" Phrases
 Watch out for subtraction!
 ★ Phrases like _____ and _____ indicate that you need to reverse the order!

Examples	Directions: Translate each expression.	
	Words	Expression
1.	"five <u>more than</u> a number"	$n + 5$
2.	"the <u>quotient</u> of a number and -2"	$\frac{x}{-2}$
3.	" <u>twice</u> a number"	$2n$
4.	"a number <u>decreased</u> by 7"	$n - 7$

5.	"the <u>product</u> of a number and twelve"	$12x$
6.	"three <u>subtracted</u> from a number"	$n - 3$
7.	"earning \$15 <u>per hour</u> "	$15h$
8.	"\$5 <u>less than</u> the cost of the ticket"	$n - 5$
9.	"the <u>sum</u> of a number and 24"	$n + 24$
10.	"50 markers divided among several students"	$\frac{50}{x}$
11.	"two-fifths <u>of</u> a number"	$\frac{2}{5}n$
12.	"half a number <u>minus</u> nineteen"	$\frac{1}{2}n - 19$
13.	"11 <u>less than</u> the <u>product</u> of a number and -4"	$-4n - 11$
14.	"the <u>total</u> of <u>eight times</u> a number and five"	$8n + 5$
15.	"the <u>difference</u> of a number squared and 14"	$n^2 - 14$
16.	"three-fourths <u>of</u> a number <u>plus</u> 17"	$\frac{3}{4}n + 17$

Going Backwards...	Directions: Write each expression in words.		
	Words	Expression	
	17.	difference of a number & 9	$n - 9$
	18.	number divided by 8	$\frac{p}{8}$
	19.	product of a number & -5	$-5x$
	20.	the sum of a number & 10	$k + 10$
	21.	one third of a number	$\frac{1}{3}m$
	22.	half a number minus 30	$\frac{a}{2} - 30$
	23.	one less than product of -7 & number	$-7n - 1$
	24.	twice a number plus 13	$2y + 13$

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PRE-ALGEBRA WITH PIZZAZZ!
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homework

What Did the Electrician Say After Fixing a Light Bulb at the Top of the Empire State Building?

Translate any phrase below into algebraic terms and find your answer in the corresponding answer column. Write the letter of the exercise in the box that contains the number of the answer. Keep working and you will discover the answer to the title question.

- | | | | |
|---|--------------------|--|--------------------------|
| F 5 more than 2 times a number | 27 $5x - 2$ | W 2 times a number, increased by 8 | 8 $3(x + 8)$ |
| H 7 less than 5 times a number | 11 $7x + 2$ | I 2 times the sum of a number and 8 | 28 $3(2x + 8)$ |
| E 5 times a number, decreased by 2 | 22 $2 + 5x$ | A 3 more than 8 times a number | 10 $2(x + 8)$ |
| I 2 diminished by 7 times a number | 19 $2x + 5$ | G 8 times the sum of a number and 3 | 24 $8x + 3$ |
| S 2 increased by 5 times a number | 6 $2x - 7$ | E 3 times the sum of a number and 8 | 3 $2x + 8$ |
| T twice a number, decreased by 7 | 7 $5x - 7$ | H two-thirds of a number | 15 $8(x + 3)$ |
| G 2 more than 7 times a number | 14 $2 - 7x$ | R 3 times the sum of twice a number and 8 | 20 $\frac{2}{3x}$ |

- | | | | |
|--|-------------------------|---|--------------------|
| A 9 less than a number | 16 $9x + 4x$ | I 10 meters higher than height x | 23 $x - 50$ |
| I 4 times a number, plus 9 | 4 $x - 9$ | L 10 mph slower than speed x | 1 $x + 10$ |
| T 9 diminished by 4 times a number | 2 $9 - 4x$ | C 50 meters deeper than depth x | 12 $6x - 2$ |
| O one-fourth of a number | 5 $9x - 4$ | H 50 mph faster than speed x | 25 $2x + 6$ |
| S 9 times a number, decreased by 4 | 26 $9x + 4$ | T 6 meters less than twice length x | 17 $2x - 6$ |
| E 4 more than 9 times a number | 21 $4x + 9$ | R 6 years older than twice age x | 13 $x - 10$ |
| H 9 times a number, increased by 4 times the number | 18 $\frac{x}{4}$ | H 2 years younger than 6 times age x | 9 $x + 50$ |

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

