

## Warm Up

### Day 34

#### Algebra 2 The Special Products

1. Multiply using the FOIL method:  $\left(x + \frac{1}{2}\right)\left(x + \frac{1}{2}\right)$
2. Multiply: Honors Level  $\frac{3}{5}x^5y^{-10}\left(25x^2 - \frac{4}{3}x^{-5}y^{10}\right)$
3. Add the following polynomials.  $2(4x + 8) - x(x + 9) + 10x(9 - x)$
4. Solve the equation:  $.3x + .4x + .7x + 2.6x = 109 - 59 - 49$  **NO CALCULATOR**



# Why Didn't Klutz Do Any Homework on Saturday?



Either multiply or factor, as directed, and find your answer in the adjacent answer column. Write the letter of that exercise in the box that contains the number of the answer.

### Multiply:

- ①  $(a + 5)(a - 5)$   
 ②  $(2 + 3a)(2 - 3a)$   
 ③  $(7a - 1)(7a + 1)$   
 ④  $(a^2 - 6)(a^2 + 6)$   
 ⑤  $(4a + b)(4a - b)$   
 ⑥  $(2a^2 - 5b)(2a^2 + 5b)$   
 ⑦  $16a^2 - b^2$   
 ⑧  $49a^2 - 1$   
 ⑨  $a^2 - 25$   
 ⑩  $4a^4 - 25b^2$   
 ⑪  $4 - 9a^2$   
 ⑫  $4a^4 - 36$   
 ⑬  $a^4 - 36$

### Factor:

- ⑭  $x^2 - y^2$   
 ⑮  $4x^2 - 49y^2$   
 ⑯  $81x^2 - 100y^2$   
 ⑰  $36x^2 - 121y^2$   
 ⑱  $9x^2 - 64y^2$   
 ⑲  $x^4 - 400$   
 ⑳  $(9x + 10y)(9x - 10y)$   
 ㉑  $(x + y)(x - y)$   
 ㉒  $(x^2 + 20)(x^2 - 20)$   
 ㉓  $(6x + 11y)(6x - 11y)$   
 ㉔  $(3x + 7y)(3x - 7y)$   
 ㉕  $(2x + 7y)(2x - 7y)$   
 ㉖  $(3x + 8y)(3x - 8y)$

### Factor:

- ①  $n^2 - 49$   
 ②  $n^2 - 1$   
 ③  $81 - n^2$   
 ④  $4n^2 - 9$   
 ⑤  $49n^2 - 16$   
 ⑥  $144 - 25n^2$   
 ⑦  $(2n + 3)(2n - 3)$   
 ⑧  $(12 + 5n)(12 - 5n)$   
 ⑨  $(n + 1)(n - 1)$   
 ⑩  $(7n + 3)(7n - 3)$   
 ⑪  $(n + 7)(n - 7)$   
 ⑫  $(9 + n)(9 - n)$   
 ⑬  $(7n + 4)(7n - 4)$

### Factor:

- ⑭  $a^6 - b^4$   
 ⑮  $25a^8 - 9b^4$   
 ⑯  $a^2b^2 - 36$   
 ⑰  $16 - a^4b^6$   
 ⑱  $a^2b^4 - c^8$   
 ⑲  $4a^{16} - 225$   
 ⑳  $(4 + a^2b^3)(4 - a^2b^3)$   
 ㉑  $(2a^8 + 15)(2a^8 - 15)$   
 ㉒  $(a^3 + b^2)(a^3 - b^2)$   
 ㉓  $(ab^2 + c^4)(ab^2 - c^4)$   
 ㉔  $(ab + 6)(ab - 6)$   
 ㉕  $(5a^4 + 3b^2)(5a^4 - 3b^2)$   
 ㉖  $(4 + ab^4)(4 - ab^4)$

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# Why Did King Kong Eat a Truck?

Circle the appropriate number-letter pairs in each column. Write the letter in the matching numbered box at the bottom of the page. (Hint: You should circle 11 number-letter pairs in each column.)

Circle the number-letter of each TRUE STATEMENT:

- 8-S  $(x + 2)^2 = x^2 + 4x + 4$
- 13-E  $(a - 5)^2 = a^2 - 10a + 25$
- 10-A  $(u + 8)^2 = u^2 + 16u + 64$
- 2-H  $(m - 4)^2 = m^2 - 16m + 16$
- 18-G  $(3x + 1)^2 = 9x^2 + 6x + 1$
- 14-D  $(5t - 2)^2 = 25t^2 - 20t + 4$
- 4-P  $(2b + 3)^2 = 4b^2 + 12b + 6$
- 20-A  $(2n + 7)^2 = 4n^2 + 28n + 49$
- 2-E  $(10d - 4)^2 = 100d^2 - 80d + 16$
- 5-K  $(8x - 1)^2 = 16x^2 - 16x + 1$
- 7-R  $(4w + 5)^2 = 16w^2 + 20w + 25$
- 4-L  $(x^2 - 3)^2 = x^4 - 6x^2 + 9$
- 11-T  $(k^2 + 9)^2 = k^4 - 18k^2 + 81$
- 5-W  $(2a + b)^2 = 4a^2 + 4ab + b^2$
- 15-A  $(3u - 2v)^2 = 9u^2 - 12uv + 4v^2$
- 6-E  $(8a + b)^2 = 64a^2 + 8ab + b^2$
- 1-H  $(c^2 - 6d^2)^2 = c^4 - 12c^2d^2 + 36d^4$
- 21-I  $(2xy - 5)^2 = 4x^2y^2 - 20xy + 10$

Circle the number-letter of each TRINOMIAL SQUARE:

- 6-A  $n^2 + 6n + 9$
- 11-N  $x^2 - 14x + 49$
- 3-R  $a^2 + 2a + 4$
- 7-Y  $c^2 + 2c + 1$
- 12-B  $k^2 - 5k + 25$
- 21-C  $x^2 - 12x + 36$
- 3-A  $4t^2 + 12t + 9$
- 12-T  $81x^2 - 18x + 1$
- 17-L  $4m^2 + 8m + 16$
- 16-B  $9w^2 - 24w + 16$
- 9-F  $25t^2 - 45t + 9$
- 22-D  $4x^4 + 8x^2 + 1$
- 9-W  $a^2 + 2ab + b^2$
- 22-K  $4m^2 + 20mn + 25n^2$
- 19-L  $9a^2 - 27ab + 9b^2$
- 17-I  $100u^2 - 60uv + 9v^2$
- 8-E  $100a^2 + 20ab + 4b^2$
- 19-M  $9x^4 + 6x^2y^2 + y^4$

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