

211

PARTNER A (top)

TEAM NAME

PARTNER B (bottom)

# What Did People Say After Two Satellite Dishes Got Married?

Simplify the expression. Write the exercise letter in the box containing the number of the answer. Partner A should do the top half and Partner B the bottom half.

A  $8^3$                       B  $8^{-3}$                       E  $(-8)^3$                       L  $(-8)^{-3}$                       I  $(-25)^2$

T  $(-25)^{-2}$                       E  $-25^{-2}$                       D  $(-44)^0$                       T  $3^{-4}$                       N  $-3^{-4}$

U  $5ab^{-3}$                       W  $\frac{5^3a^{-3}}{b}$                       D  $\frac{5^{-3}a}{b^{-3}}$                       H  $2^4a^0b^{-8}$                       S  $\frac{2^{-4}}{a^{-1}b^8}$

W  $\frac{7^{-1}k^5}{n^2}$                       L  $\frac{7^{-2}k^{-5}}{n^{-2}}$                       G  $\frac{7^{-3}n^{-2}}{k^0}$                       D  $\frac{(-7)^{-2}}{2kn^{-2}}$                       U  $\frac{-7^{-2}n^2}{2k^{-5}}$

Q 625                      10  $-\frac{1}{81}$                       19  $-\frac{1}{512}$                       22  $\frac{1}{512}$                       11  $\frac{1}{343n^2}$                       15  $\frac{a}{16b^8}$                       23  $\frac{5a}{b^3}$                       8  $\frac{ab^3}{125}$

17 1                      14 512                      6  $-\frac{1}{625}$                       16 -81                      18  $-\frac{n^2k^5}{98}$                       4  $\frac{n^2}{343}$                       20  $\frac{n^2}{49k^5}$                       2  $\frac{16}{b^8}$

12  $-625$                       1  $\frac{1}{81}$                       3 -512                      24  $\frac{1}{625}$                       5  $\frac{k^5}{7n^2}$                       13  $\frac{125}{a^3b}$                       21  $\frac{k^5}{98n}$                       7  $\frac{n^2}{98k}$

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
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O  $7^3$                       E  $7^{-3}$                       A  $(-7)^3$                       H  $(-7)^{-3}$                       T  $(-20)^2$

E  $(-20)^{-2}$                       A  $-20^{-2}$                       S  $(-99)^0$                       E  $4^{-4}$                       I  $-4^{-4}$

T  $9ab^{-2}$                       E  $\frac{9^2a^{-2}}{b}$                       T  $\frac{9^{-2}a}{b^{-2}}$                       W  $4^3a^0b^{-10}$                       R  $\frac{4^{-3}}{a^{-1}b^{10}}$

G  $\frac{6^{-1}k^8}{n^3}$                       N  $\frac{6^{-2}k^{-8}}{n^{-3}}$                       C  $\frac{6^{-3}n^{-3}}{k^0}$                       R  $\frac{(-6)^{-2}}{4kn^{-3}}$                       P  $\frac{-6^{-2}n^3}{4k^{-8}}$

23  $-\frac{1}{400}$                       13 343                      17 -343                      22  $\frac{1}{343}$                       10  $-\frac{n^3k^8}{144}$                       16  $\frac{64}{b^{10}}$                       6  $\frac{a}{64b^{10}}$                       24  $\frac{9a}{b^2}$

1 -256                      7  $\frac{1}{400}$                       12  $-\frac{1}{256}$                       18 1                      20  $\frac{k^8}{6n^3}$                       9  $\frac{81}{a^2b}$                       21  $\frac{n^3}{144k}$                       19  $\frac{81a}{b^2}$

3  $-\frac{1}{343}$                       11 400                      15 -625                      4  $\frac{1}{256}$                       8  $\frac{1}{216n^3}$                       5  $\frac{b^{10}}{64a}$                       14  $\frac{n^3}{36k^8}$                       2  $\frac{ab^2}{81}$

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
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**Practice 8-1****Problems:**

1-52 multiples of 3 (3, 6, 9, ...)  
 61-72 odd.....  
 Zero and Negative Exponents

Simplify each expression.

- |                          |                             |                              |                             |
|--------------------------|-----------------------------|------------------------------|-----------------------------|
| 1. $16^0$                | 2. $4^{-2}$                 | 3. $3^{-3}$                  | 4. $8^{-4}$                 |
| 5. $\frac{1}{2^{-5}}$    | 6. $\frac{4}{4^{-3}}$       | 7. $\frac{3}{6^{-1}}$        | 8. $\frac{2^{-1}}{2^{-5}}$  |
| 9. $3 \cdot 8^0$         | 10. $16 \cdot 2^{-2}$       | 11. $12^{-1}$                | 12. $-7^{-2}$               |
| 13. $16 \cdot 4^0$       | 14. $9^0$                   | 15. $\frac{32^{-1}}{8^{-1}}$ | 16. $\frac{9}{2^{-1}}$      |
| 17. $\frac{8^{-2}}{4^0}$ | 18. $\frac{9^{-1}}{3^{-2}}$ | 19. $5(-6)^0$                | 20. $(3 \cdot 7)^0$         |
| 21. $(-9)^{-2}$          | 22. $(-4 \cdot 9)^0$        | 23. $-6 \cdot 3^{-4}$        | 24. $\frac{7^{-2}}{4^{-1}}$ |

Evaluate each expression for  $a = -2$  and  $b = 6$ .

- |                     |                      |                          |                  |
|---------------------|----------------------|--------------------------|------------------|
| 25. $b^{-2}$        | 26. $a^{-3}$         | 27. $(-a)^{-4}$          | 28. $-b^{-3}$    |
| 29. $4a^{-3}$       | 30. $2b^{-2}$        | 31. $(3a)^{-2}$          | 32. $(-b)^{-2}$  |
| 33. $2a^{-1}b^{-2}$ | 34. $-4a^{-2}b^{-3}$ | 35. $3^{-2}a^{-2}b^{-1}$ | 36. $(3ab)^{-2}$ |

Simplify each expression.

- |                             |                              |                                |                                    |
|-----------------------------|------------------------------|--------------------------------|------------------------------------|
| 37. $x^{-8}$                | 38. $xy^{-3}$                | 39. $a^{-5}b$                  | 40. $m^2n^{-9}$                    |
| 41. $\frac{1}{x^{-7}}$      | 42. $\frac{3}{a^{-4}}$       | 43. $\frac{5}{d^{-3}}$         | 44. $\frac{6}{r^{-5}s^{-1}}$       |
| 45. $3x^{-6}y^{-5}$         | 46. $8a^{-3}b^2c^{-2}$       | 47. $15s^{-9}t^{-1}$           | 48. $-7p^{-5}q^{-3}r^2$            |
| 49. $\frac{d^{-4}}{e^{-7}}$ | 50. $\frac{3m^{-4}}{n^{-8}}$ | 51. $\frac{6rn^{-8}n}{p^{-1}}$ | 52. $\frac{a^{-2}b^{-1}}{cd^{-3}}$ |

Write each number as a power of 10 using a negative exponent.

- |                        |                           |                            |                               |
|------------------------|---------------------------|----------------------------|-------------------------------|
| 53. $\frac{1}{10,000}$ | 54. $\frac{1}{1,000,000}$ | 55. $\frac{1}{10,000,000}$ | 56. $\frac{1}{1,000,000,000}$ |
|------------------------|---------------------------|----------------------------|-------------------------------|

Write each expression as a decimal.

- |               |               |                       |                       |
|---------------|---------------|-----------------------|-----------------------|
| 57. $10^{-5}$ | 58. $10^{-8}$ | 59. $4 \cdot 10^{-1}$ | 60. $6 \cdot 10^{-4}$ |
|---------------|---------------|-----------------------|-----------------------|

Evaluate each expression for  $m = 4$ ,  $n = 5$ , and  $p = -2$ .

- |              |                     |                        |               |
|--------------|---------------------|------------------------|---------------|
| 61. $m^p$    | 62. $n^m$           | 63. $p^p$              | 64. $n^p$     |
| 65. $m^p n$  | 66. $m^{-n}$        | 67. $p^{-n}$           | 68. $mn^p$    |
| 69. $p^{-m}$ | 70. $\frac{m}{n^p}$ | 71. $\frac{1}{n^{-m}}$ | 72. $-n^{-m}$ |