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UNIT 1 Foundation

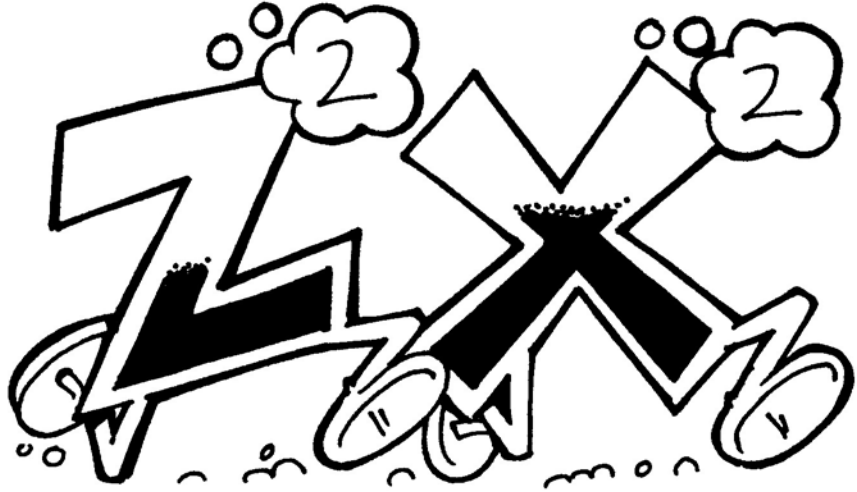
Collecting Like Terms

Like terms have the same variable(s) and exponent(s). The terms $2xy$ and xy are like terms, but x^2 and x^3 are not. Like terms may be collected by adding or subtracting the coefficients in front of those terms. For example, $4x - 2x + x = 3x$.



Simplify:

- $2x + y - x + 3y$
- $xy - 3xy$
- $5x + 4y - 2x^2 - xy$
- $-5x - y - 3x + 2y$
- $-6z^2 - 3 - z^2 + 7$



UNIT 1 Foundation

Signs and Symbols

Match the sign or symbol with its meaning.

- | | | | |
|--------------|-----------|----------|-------------------|
| a. $ \dots $ | b. π | c. \pm | d. \leq |
| e. \approx | f. \neq | g. $>$ | h. $\sqrt{\quad}$ |

- | | |
|-------------------------|--------------------------------|
| _____ 1. plus or minus | _____ 5. approximately |
| _____ 2. square root | _____ 6. less than or equal to |
| _____ 3. absolute value | _____ 7. not equal to |
| _____ 4. 3.14 | _____ 8. greater than |



UNIT 3 Games, Fun and Mystery

Anyone for Bowling?

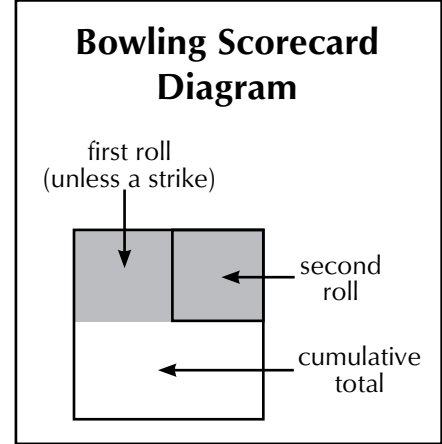
Scoring a game of bowling requires that you learn these symbols:

1. X = a strike (10 plus the number of pins knocked down on the next two rolls);
2. / = a spare (10 plus the number of pins knocked down on the next roll) and
3. - = (miss). For example:

1	2	3	4	5				
X	7	2	9	/	5	/	6	-
19	28	43	59	65				

Now, score the following game of bowling:

1	2	3	4	5				
7	/	8	1	X	5	4		X
6	7	8	9	10				
X	6	/	X	-	9	8	/	9



UNIT 3 Games, Fun and Mystery

Take Five

Directions: Answer the five questions below. Be careful, some may be tricky!

1. How many eights are there in all between 1 and 100?
2. If you read pages 9-31, how many pages have you read?
3. What is 10 divided by $\frac{1}{2}$ then added to four?
4. When four friends get together, each friend shakes hands with each of the other friends. How many handshakes will there be all together?
5. Without looking at the telephone, what are the actual telephone numbers used to dial: 1-800-ALGEBRA.



UNIT 10 Radicals

$\sqrt{a} \cdot \sqrt{b} = \sqrt{ab}$ Radical Rule

The rule above makes multiplying radicals easy.
Here are some examples:

- $\sqrt{3} \cdot \sqrt{2} = \sqrt{6}$
- $3\sqrt{2} \cdot 2\sqrt{8} = (3 \cdot 2)\sqrt{2 \cdot 8} = 6\sqrt{16} = 6 \cdot 4 = 24$

Multiply and simplify the following expressions:

- $\sqrt{7} \cdot \sqrt{3} =$
- $3\sqrt{5} \cdot 4\sqrt{7} =$
- $\sqrt{3} \cdot \sqrt{12} =$
- $2\sqrt{2} \cdot 5\sqrt{6} =$
- $(\sqrt{3} + 2)(\sqrt{3} - 2) =$



UNIT 10 Radicals

$\sqrt{\text{Fact}}$ or $\sqrt{\text{Fiction}}?$

- $x^0 = 1$
- $2^{-3} = -8$
- $111,111,111 \times 111,111,111 = 12,345,678,987,654,321$
- $\sqrt{y^6} = y^3$
- $\sqrt{x^5} = x^2\sqrt{x}$
- $\sqrt{x} + \sqrt{y} = \sqrt{xy}$
- $2\sqrt{3} + \sqrt{3} = 3\sqrt{3}$
- $\sqrt{12} \cdot \sqrt{3} = 6$

