

Don't let those algebra skills get lost or rusty!

As a teacher you work hard to teach algebra skills and concepts to your students. Your students work hard to understand and master them. Do you worry that they will forget the material as you move on to the next concept?

If so, here's a plan for you and your students—one that will keep those algebra skills sharp.

Use It! Don't Lose It! provides daily algebra practice for all the basic skills, concepts, and processes. There are five problems a day, every day for 36 weeks. The skills and concepts match the basic curriculum for an Algebra I course, and are correlated to national and state standards.

Students practice all the algebra skills, concepts, and processes in a spiraling sequence. The plan starts with the simplest level of algebra skills, progressing gradually to higher-level tasks, as it continually circles around and back to the the same skills at a little higher level, again and again. Each time a skill shows up, it has a new context—requiring students to dig into their memories, recall what they know, and apply it to another situation.

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Name _____

1. In 1985, Nike released the *Air Jordan I* athletic shoe. Evaluate the expression below to find the amount of sales (in dollars) of these shoes in the first year.

$$10^5 \cdot 10^2 \sqrt{169}$$

2. Write this number in words: **101.0101**

3. Solve: $\frac{88}{n} = 30 - 41$

4. Members of a tennis team wore out three pairs of shoes in a year. Cross-country runners wore out four pairs a year. Which expression represents the total shoes worn out in a year?

(*t* = # of tennis players,
r = # of cross-country runners)

$$\begin{array}{ll} 7(r + t) & (r + t)(3)(4) \\ 4r + 3t & 7(r - t) \end{array}$$



integers

example:

description:

whole numbers

example:

description:

rational numbers

example:

description:

irrational numbers

example:

description:



5. For each of these subsets of the real number system, give a description and an example.

Name _____

1. Solve: $2x^2 + 4 = x^2 + 29$

2. Mom's shoofly pie has a diameter of nine inches. She cuts it into eight equal pieces and serves one to me. What is the measurement of the outside rounded edge of my slice?

3. Write in order from least to greatest.

$$\begin{array}{lll} -7 & \sqrt[3]{-27} & 77 \\ 0.7 & -7.7 & (-7)^2 \end{array}$$

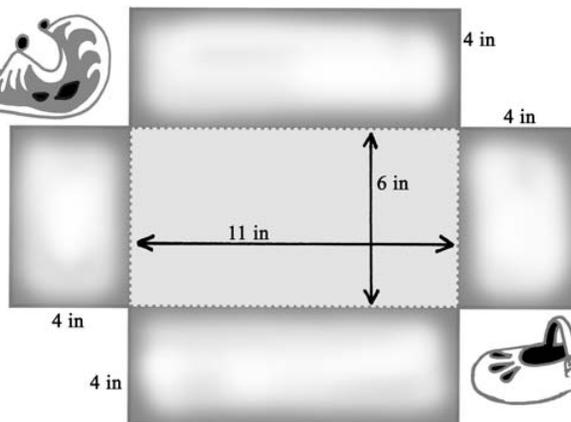
4. Evaluate each expression.

$$\sqrt[3]{125}$$

$$\sqrt{484}$$

$$\sqrt[6]{64}$$

5. Abby creates a shoebox by folding the pattern below on dotted lines and gluing or taping the corners. Write a formula and use it to find the volume of the box.



Name _____

1. A group of students made a chain of shoelaces and strung it around the perimeter of a football field (120 yd long, 53 yd wide). They calculated the perimeter of the field to be 293 yards. Were they correct?

2. What is the second operation to be performed in evaluating the expression?

$$\sqrt{961 + y^2} - (6y - 2y)$$

3. The world's largest sandal has a width that is 2.47 meters less than its length. Write an expression to show this comparison.

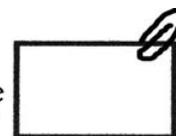
4. Circle the correct simplification of $\frac{n^{12}}{n^2}$.

n^6 n^{14} n^{10} n^{24}

5. A farrier puts new shoes on a horse named Pablo. The farrier is five years older than three times the age of the horse. The sum of their ages is 33.



What will Pablo's age be in 5 years?



Name _____

1. Evaluate: $\sqrt[3]{-216}$

2. When the world record was set for the most participants wearing Wellington boots in a race, the number was surprisingly large. The expression will help you find that number.

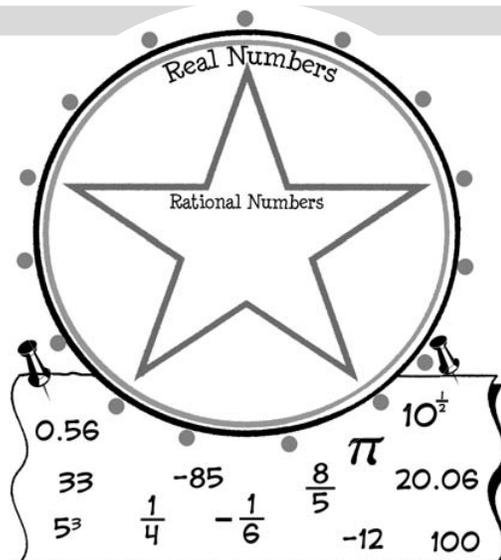
$$3^2(90 + 19)$$

3. Evaluate for $p = \frac{1}{5}$.

$$p^2 + 5 - 1\frac{1}{25}$$

4. In a horseshoe-tossing tournament, Louis had five tosses, totaling 1,866 feet. The first three were 274 feet, 316 feet, and 250 feet. The last two tosses were the same. What was the distance of his fifth toss?

5. Place the following numbers correctly into the sets shown below in the diagram.



1. Is this the correct graph for the statement?

$x \geq -2$

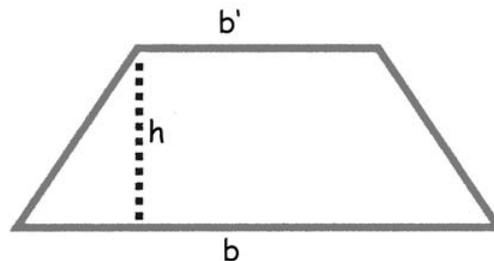


2. Circle the number systems to which each one of these belongs.

(*R* = real, *N* = natural, *W* = whole, *IN* = integers, *RA* = rational, *IR* = irrational)

- a) $\frac{7}{8}$ R N W IN RA IR
- b) -9 R N W IN RA IR
- c) **12** R N W IN RA IR

3. Solve for h: $A = \frac{h}{2}(b + b')$



4. Amanda throws all her shoes into a big bag in her closet. There are 15 pairs of shoes—4 pairs are soccer shoes. She reaches in without looking and grabs a shoe. What is the probability that it will be a RIGHT soccer shoe?

5. Challenge Problem

Workers in an athletic shoe warehouse are putting in extra hours today. When the air conditioning went haywire in the huge building, temperatures soared. The glue that held labels onto the shoeboxes dried out and fell off. Now workers had to look inside each box to figure out what style it held. In the first 150 boxes, they found 12 pairs of the \$175 *Air Jordan XXII* models.

They used a random sampling method to predict how many of this same style they would find in the total of 2,700 shoeboxes.



Write and solve a proportion to see what they found.

Prediction: They will find _____ pairs of *Air Jordan XXII*'s in 2700 boxes.