1-1 Additional Practice

Operations on Real Numbers

1. Set *G* is the set of positive integers divisible by 4 and Set *F* is the set of perfect squares. List the first 5 elements of set *H*, which contains numbers in *G* that are also elements of *F*.

2. Which elements of the set of natural numbers are also irrational numbers?

3. When you divide an even number by an even number, is the result always an even number? Justify your answer.

4. When you subtract two positive integers, is the result always a positive integer? Justify your answer.

5. For each of these expressions, draw a line or lines to show the subset(s) of the real numbers it belongs to.

a. $0 - 10$	Irrational Numbers
b. $-3 + \sqrt{3}$	Rational Numbers
c. $\frac{5}{12} + 4\frac{1}{3}$	Integers
d. $7 \times \sqrt{49}$	Whole Numbers

Order from least to greatest.

6. $\sqrt{\frac{4}{9}}, \frac{1}{4}, 0.6$

7. $\sqrt{5}, \sqrt{\frac{25}{16}}, 1.8$

8. $\sqrt{\frac{12}{3}}, 1.01, \sqrt{0.09}$

9. Is the quotient of $\sqrt{10}$ and 5 a rational number? Explain.

10. Is the difference of $\sqrt{18}$ and 3 a rational number? Explain.

11. Can the sum of two irrational numbers ever be a rational number? Can the quotient of two irrational numbers ever be a rational number? Explain with examples.

12. To put a narrow border around a square photo, Alicia has 32 inches of trim. The area of the photo is 60 square inches. Will she have enough trim for all four sides of the square? Explain how you decided.