Practice Problems for Numbers
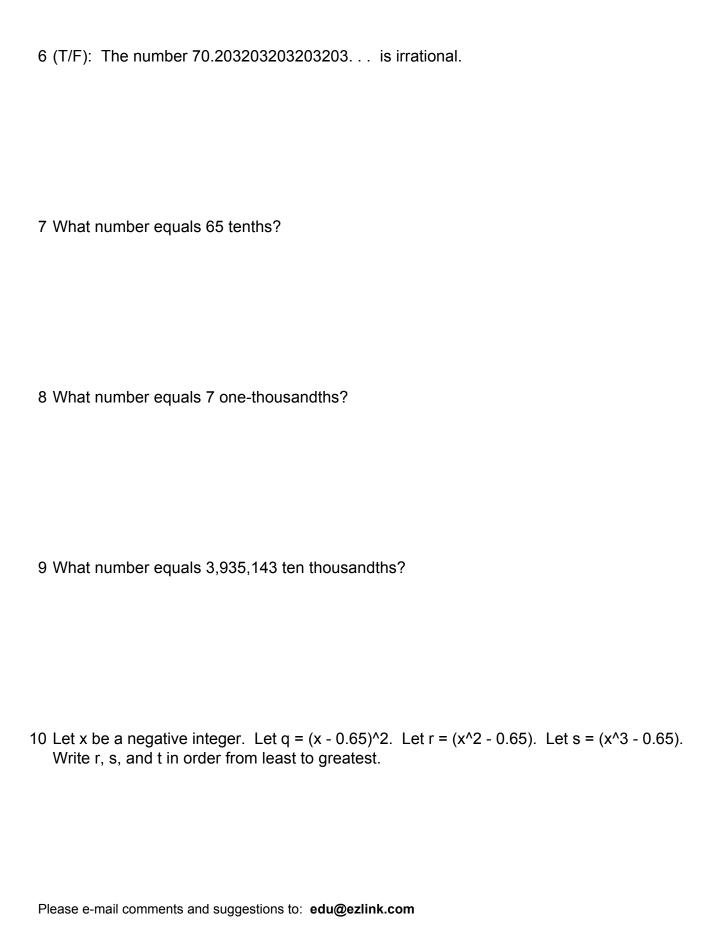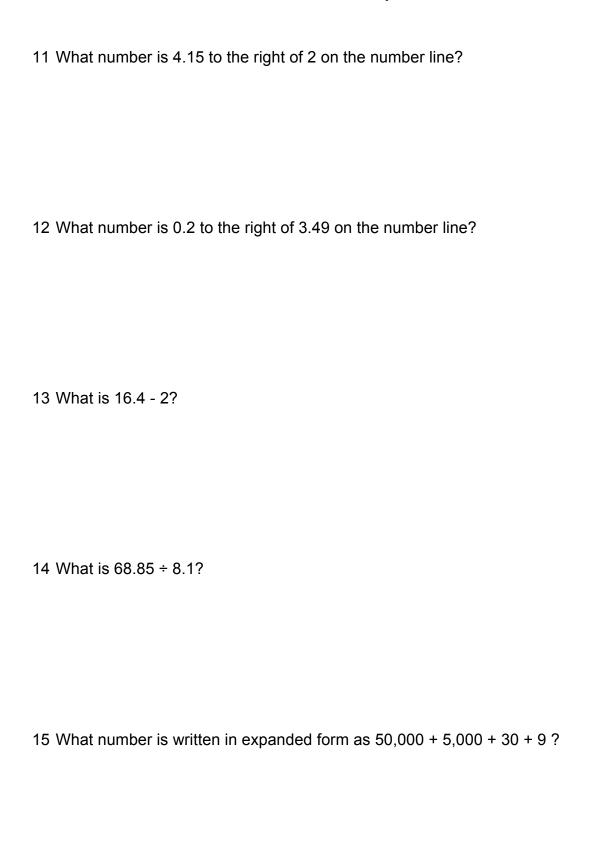## from www.topmath.info

1 What number equals the Roman numeral CC ?

2 What is the base 10 equivalent of the base four number 30?

3 What is the base 10 equivalent of the base three number 2221?

4 (T/F): 11 is an odd number.

5 (T/F): The square root of 45 is a rational number.

6 (T/F): The number 70.203203203203203. . . is irrational.

7 What number equals 65 tenths?

8 What number equals 7 one-thousandths?

9 What number equals 3,935,143 ten thousandths?

10 Let x be a negative integer. Let q = (x - 0.65)^2. Let r = (x^2 - 0.65). Let s = (x^3 - 0.65).
   Write r, s, and t in order from least to greatest.

11 What number is 4.15 to the right of 2 on the number line?

12 What number is 0.2 to the right of 3.49 on the number line?

13 What is 16.4 - 2?

14 What is 68.85 ÷ 8.1?

15 What number is written in expanded form as 50,000 + 5,000 + 30 + 9 ?

1 ANSWER: 200

2 ANSWER: 12

3 ANSWER: 79

4 ANSWER: True. EXPLANATION: A number is even if and only if it is an integer that ends in 0, 2, 4, 6, or 8. Integers that end in 1, 3, 5, 7, or 9 are odd. Since 11 ends in 1, it is odd.

5 ANSWER: False. EXPLANATION: Only perfect squares have rational square roots. Since there is no integer that can be multiplied by itself to make 45, the square root of 45 is irrational.

6 ANSWER: False. EXPLANATION: A rational number has one or more digits to the right of the decimal point that repeat forever. In this case, the number 203 repeats forever, so the number is rational.

7 ANSWER: 6.5. EXPLANATION: To solve this, simply multiply 65 by 0.10.

8 ANSWER: 0.007. EXPLANATION: To solve this, simply multiply 7 by 0.001, which is equivalent to moving the decimal point three places to the left..

9 ANSWER: 393.5143

10 ANSWER: s, r, q. EXPLANATION: Clearly, q and r will both be positive, but s will be negative, so s will be least. Subtracting 0.65 from the negative integer x before squaring it means the resulting square is larger than it would otherwise have been, so $(x - 0.65)^2$ must be greater than x^2, and q must be greater than r.

11 ANSWER: 6.15

12 ANSWER: 3.69

13 ANSWER: 14.4

14 ANSWER: 8.5

15 ANSWER: 55,039. EXPLANATION: To convert numbers from expanded notation, simply add up the individual numbers shown in the expanded notation. In this case, the total is 55,039.