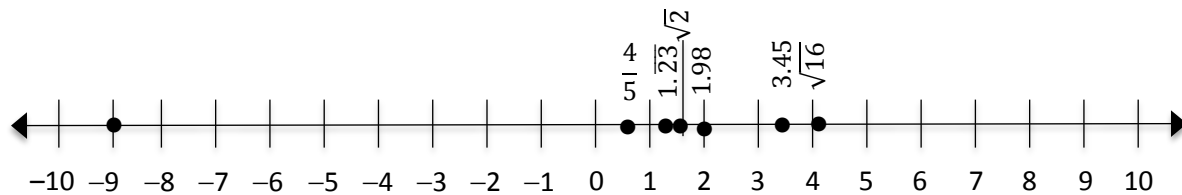


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## Rational and Irrational Numbers Time to Practice – Answer Key

Directions: Classify each of the following numbers as real, whole, integer, rational, or irrational. Some numbers will have more than one classification.

1. 3.45      **Real, rational**
2. -9        **Real, integer, rational**
3. 1,270     **Real, whole, integer, rational**
4. 1.232323 **Real, rational**
5.  $\frac{4}{5}$         **Real, rational**
6. -232,323 **Real, integer, rational**
7. -98        **Real, integer, rational**
8. 1.98       **Real, rational**
9.  $\sqrt{16}$       **Real, whole, integer, rational**
10.  $\sqrt{2}$        **Real, irrational**



Directions: Answer each question as true or false.

11. An irrational number can also be a real number.    **True**
12. An irrational number is a real number and an integer.    **False**
13. A whole number is also an integer.    **True**
14. A decimal is considered a real number and a rational number.    **False**
15. A negative decimal can still be considered an integer.    **False**
16. An irrational number is a terminating decimal.    **False**
17. A radical is always an irrational number.    **False**
18. Negative whole numbers are integers and are also rational numbers.    **True**
19. Pi is an example of an irrational number.    **True**
20. A repeating decimal is also a rational number.    **True**

Directions: Approximate the solution for each equation given the irrational numbers.

21.  $\sqrt{2} + 5 = \chi \approx \mathbf{6.41}$

22.  $8 = \sqrt{2} + \chi \approx \mathbf{6.59}$

23.  $t = \pi - 5.3 \approx \mathbf{(-2.16)}$

24.  $\sqrt{h} = \sqrt{6} - \frac{3}{4} \approx \mathbf{2.89}$

25. Mrs. DeFazio wrote the following equation on the board:  $w = \sqrt{11} - 2^2$ .  
What is the value of  $w$  in Mrs. DeFazio's equation?  $\approx \mathbf{(-0.68)}$