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. \( \sqrt{2} + 5 = \chi \approx 6.41 \)

22. \( 8 = \sqrt{2} + \chi \approx 6.59 \)

23. \( t = \pi - 5.3 \approx (-2.16) \)

24. \( \sqrt{h} = \sqrt{6} - \frac{3}{4} \approx 2.89 \)

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? \( \approx (-0.68) \)