

Lesson 7 Homework Practice

The Real Number System

Name all sets of numbers to which each real number belongs. Write *natural*, *whole*, *integer*, *rational*, or *irrational*.

1. 15

2. -41

3. $\frac{1}{4}$

4. $\frac{1}{3}$

5. 0.212121...

6. $\sqrt{8}$

7. $\sqrt{45}$

8. $\frac{36}{9}$

9. $-\frac{28}{7}$

10. 2.31

11. 45.6

12. 0.090090009...

Determine whether each statement is *always*, *sometimes*, or *never* true.

13. A decimal number is an irrational number.

14. An integer is a whole number.

15. A whole number is an integer.

16. A negative integer is a whole number.

Replace each \bullet with $<$, $>$, or $=$ to make a true sentence.

17. $3.2 \bullet \sqrt{9.5}$

18. $1\frac{1}{2} \bullet \sqrt{3}$

19. $\sqrt{17} \bullet 4.1$

20. $\sqrt{7.84} \bullet 2.8$

21. $1\frac{3}{4} \bullet \sqrt{3.0625}$

22. $3.67 \bullet \sqrt{12}$

Order each set of numbers from least to greatest.

23. $\sqrt{49}$, $6\overline{91}$, $7\frac{1}{8}$, $\frac{15}{2}$

24. $4\frac{1}{3}$, $\sqrt{43}$, $\frac{12}{3}$, 4.13

25. -2 , -1.5 , $-1\frac{8}{10}$, $-\sqrt{6}$

Solve each equation. Round to the nearest tenth, if necessary.

26. $h^2 = 361$

27. $k^2 = 10.24$

28. $c^2 = 111$

29. $729 = t^3$

30. $0.089 = u^2$

31. $w^3 = -0.027$

32. Ray planted a square garden that covers an area of 200 ft^2 . How many feet of fencing does he need to surround the garden? Round to the nearest tenth.