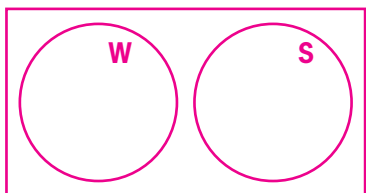**DIGITAL**

NAME _____ **DATE** _____

Module Test B

Module 1

1. From the set $\left\{-7, -3.4, -\frac{7}{8}, 0, 3\frac{1}{2}, \sqrt{5}, \sqrt{49}\right\}$,

   a. Name all integers. **$-7, 0, \sqrt{49}$**

   b. Name all rational numbers. **$-7, -3.4, -\frac{7}{8}, 0, 3\frac{1}{2}, \sqrt{49}$**

   c. Name all real numbers. **$-7, -3.4, -\frac{7}{8}, 0, 3\frac{1}{2}, \sqrt{5}, \sqrt{49}$**

   d. Name all irrational numbers. **$\sqrt{5}$**

   e. Name all whole numbers. **$0, \sqrt{49}$**

2. In the space below, draw a Venn diagram illustrating the relationship between the whole numbers and the irrational numbers.

3. If possible, name a rational number that is *not* a real number.

   This is not possible; all rational numbers are real numbers.

4. Identify all the sets of numbers to which each of the following belong:

   a. -11.1 **rational, real**

   b. -8 **integer, rational, real**

   c. $\frac{\pi}{4}$ **irrational, real**

   d. $-\frac{17}{5}$ **rational, real**

   e. 0 **whole, integer, rational, real**

5. In the space below, graph on a number line -5, $-\pi$, -1.73, 0, $\frac{15}{4}$, $\sqrt{17}$.
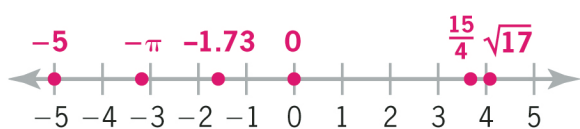
Simplify, if possible.

6. $15 + (-8)$

7

7. $-9 - (-11)$

2

8. $(6)(-9)$

−54

9. $\frac{0}{-15}$

0

10. $7 + (-1) + 8 + (-13)$

1

11. $\left(\frac{4}{7}\right) + \left(-\frac{3}{4}\right)$

$-\frac{\mathbf{5}}{\mathbf{28}}$

12. $-5.9 - 2.7$

−8.6

13. $(-11.7)(-2.1)$

24.57

14. $\left(-\frac{2}{17}\right) \div \left(-\frac{8}{85}\right)$ $\frac{\mathbf{5}}{\mathbf{4}}$ **or** $\mathbf{1}\frac{\mathbf{1}}{\mathbf{4}}$

15. $\left(\frac{2}{3}\right)\left(-\frac{15}{7}\right)\left(\frac{3}{0}\right)\left(\frac{-7}{11}\right)\left(-\frac{5}{11}\right)$

undefined or not possible

16. -5^2

−25

17. $-\sqrt{36}$

−6

18. $\sqrt[3]{-27}$

−3

19. $(-2)^3$

−8

20. $\sqrt{-4}$

not a real number

21. $7 - 2(5 - 9)$

15

22. $5^3 - 3^2$

116

23. $\frac{15 - 3(-7)}{-7 - 5}$

−3

24. $7[3(5 - 7)] \div 2(\sqrt{9})$

−63

25. $13 + 7\left\{-3(4|7 - 15|) + \frac{18}{6}\right\} \div 7$

−80