Insert <, > or = in the appropriate space to make the statement true.

1. - 9 _____ 8

2. $|-7|$ _____ - 6

Are the following statements true or false?

3. $8 \cdot 8 \leq 8 \cdot 7$ _____

4. $3 + 8 \geq 3(8)$ _____

Tell which set, or sets each number belongs to: natural, whole, integer, rational, irrational and real.

5. 0

_____

_____

6. $-\frac{1}{2}$

_____

_____

7. 6

_____

_____

8. $-\sqrt{5}$

_____

_____

Perform each indicated operation. Be sure to leave all answers in simplest form.

9. $\frac{2}{3} - (-\frac{5}{9}) =$ _____

10. $\frac{5}{8}(-\frac{3}{7}) =$ _____

11. $\frac{6}{7} \div \frac{5}{9} =$ _____

12. $\frac{\frac{3}{4}}{\frac{5}{7}} =$ _____

Use integers to represent the values in each statement.

13. The number of graduate students at the University of Texas at Austin is 28,000 fewer than the number of undergraduate students.

14. Aris Pena was deep-sea diving. During her dive, she ascended 30 feet and later descended 50 feet.

Tell whether each statement is true or false.

15. A number can be both rational and irrational. _____

16. Every whole number is positive. _____

17. Every irrational number is also a real number. _____

18. In your own words, explain how to find the absolute value of a number. What does the absolute value of a number represent? Be specific and provide examples.

_____
_____
_____
_____
_____
_____
_____

19. Give an example of a real-life situation that can be described with integers but not with whole numbers. Explain.

_____
_____
_____
_____
_____

20. The following problem has been completed step by step. Explain, using detail and correct math terminology, each step.

1. $-\frac{2}{5} \div \frac{6}{8}$	
2. $-\frac{2}{5} \cdot \frac{8}{6}$	Step 1:
3. $-\frac{16}{30}$	Step 2:
4. $-\frac{8}{15}$	Step 3: