

CH 2 REVIEW HW PRIOR TO TEST

Tell whether the number is a real number, a rational number, an irrational number, an integer, or a whole number.

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

RAT.

2. $\sqrt{90}$

IRRAT.

3. $-\sqrt{144}$

RAT.
INTEGER

4. 8.95

RAT.

ALL REAL NUMBERS

Now Whole #s

Order the numbers in the list from least to greatest.

5. $-\frac{5}{3}, -2, 3, \frac{1}{2}, -1.07$

$-1\frac{2}{3}$

$-2, -\frac{5}{3}, -1.07, \frac{1}{2}, 3$

6. $\sqrt{15}, -4.3, 4.2, 0, -\sqrt{25}$

$-\sqrt{25}, -4.3, 0, \sqrt{15}, 4.2$

Find the sum, difference, product, or quotient.

7. $-5 + 2$

-3

8. $1.3 + (-10.4)$

-9.1

9. $-\frac{1}{3} + \frac{1}{6}$

$-\frac{1}{6}$

10. $-\frac{2}{7} - \frac{5}{14}$

$-\frac{9}{14}$

11. $-41 - 32$

-73

12. $7.2 - (-11.6)$

18.8

13. $-11(-7)$

77

14. $-4.5(20)(2)$

-180

15. $-\frac{1}{5}(-20)(-5)$

-20

16. $-36 \div (-6)$

6

17. $-\frac{3}{5} \div 12$

$-\frac{1}{20}$

18. $5 \div (-\frac{10}{11})$

$-5\frac{1}{2}$

Evaluate the expression when $x = -6$ and $y = -10$.

19. $-x$

$-(-6) = 6$

20. $|y|$

$|-10| = 10$

21. $8 - (x - y)$

$8 - (-6 - (-10))$
 $8 - 4 = 4$

22. $-4x + y$

$-4(-6) + -10 = 14$

Simplify the expression.

23. $-9(y - 7)$

$-9y + 63$

24. $8(x - 4) - 10x$

$-2x - 32$

25. $\frac{-7w - 21}{7}$

$-w - 3$

26. $\frac{-16v + 8}{-4}$

$4v - 2$

In Exercises 27 and 28, rewrite the conditional statement in if-then form. Then tell whether the statement is true or false. If it is false, give a counterexample.

27. No rational numbers are integers.

IF A NUMBER IS RATIONAL THEN IT IS NOT AN INTEGER IS FALSE

28. All irrational numbers are real numbers.

TRUE

EX: $-\frac{1}{2}$ IS RAT + INTEGER

29. **MUSIC** The revenue from sales of digital pianos in the United States was \$152.4 million in 2001 and \$149.0 million in 2002. Find the change in revenue from 2001 to 2002.

REVENUE DECREASED \$3.4 million

30. **ELEVATORS** An elevator moves at a rate of -5.8 feet per second from a height of 300 feet above the ground. It takes 3 seconds for the elevator to make its first stop. How many feet above the ground is the elevator now?

$300 + 3(-5.8) = 282.6 \text{ FT ABOVE GROUND}$

31. **SUMMER JOBS** You plan to work a total of 25 hours per week at two summer jobs. You will earn \$8.75 per hour working at a cafe and \$10.50 per hour working at an auto shop. Write an equation that gives your weekly pay p (in dollars) as a function of the time t (in hours) spent working at the cafe. Then find your weekly pay if you work 10 hours at the cafe.

$P = 8.75T + 10.50(25 - T)$

SIMPLIFY

$P = -1.75T + 262.5$

PAID \$245 IF WORK HRS AT CAFE

KT: 25 HRS PER WK FOR 2
\$8.75/hr - cafe
\$10.50/hr - auto

P = WEEKLY PAY \$'S
T = TIME (HRS) AT CAFE

25 - T = AT AUTO

32. **TEMPERATURES** The low temperatures for Montreal, Quebec, in Canada on February 12 for each year during the period 2000-2004 are -6.7°F , -4.2°F , 4.1°F , -3.6°F , and 0.3°F . Find the mean of the temperatures.

MEAN = $-\frac{10.1}{5}$

MEAN TEMP IS -2.02°F