

Exam 1 Sections 2.1–2.6 Extra Practice

Spring 2011 Math 084 V01

No book/No Notes/No calculator/No Phone/No iPod/55 Minutes

Work of your thought process must be shown.

Name _____

Solve the problem.

1) Four times a number added to 7 times the number equals 44. Find the number.

Use the given information to write an equation. Let x represent the number described in the exercise. Then solve the equation and find the number.

2) Four times a number added to 9 times the number equals 39. Find the number.

3) When 5 times a number is subtracted from 7 times the number, the result is 18. Find the number.

Let x represent the number. Use the given conditions to write an equation. Solve the equation and find the number

4) If 3 times a number is added to -7 , the result is equal to 10 times the number. Find the number.

5) When 4 times a number is subtracted from 7 times the number, the result is 21. Find the number.

Solve the problem.

6) A promotional deal for long distance phone service charges a \$15 basic fee plus \$0.05 per minute for all calls. If Joe's phone bill was \$54 under this promotional deal, how many minutes of phone calls did he make? Round to the nearest integer, if necessary.

7) A promotional deal for long distance phone service charges a \$15 basic fee plus \$0.05 per minute for all calls. If Joe's phone bill was \$66 under this promotional deal, how many minutes of phone calls did he make? Round to the nearest integer, if necessary.

8) There are 18 more sophomores than juniors in an algebra class. If there are 72 students in this class, find the number of sophomores and the number of juniors in the class.

9) There are 20 more sophomores than juniors in an algebra class. If there are 102 students in this class, find the number of sophomores and the number of juniors in the class.

10) A car rental agency advertised renting a luxury, full-size car for \$29.95 per day and \$0.39 per mile. If you rent this car for 5 days, how many whole miles can you drive if you only have \$200 to spend?

11) A car rental agency advertised renting a luxury, full-size car for \$34.95 per day and \$0.19 per mile. If you rent this car for 3 days, how many whole miles can you drive if you only have \$200 to spend?

12) Claire has received scores of 85, 88, 87, and 95 on her algebra tests. What score must she receive on the fifth test to have an overall test score average of at least 90?

13) Claire has received scores of 85, 88, 87, and 75 on her algebra tests. What score must she receive on the fifth test to have an overall test score average of at least 83?

14) The length of a rectangle is 36 feet. For what widths is the perimeter less than 92 feet?

15) The length of a rectangle is 30 feet. For what widths is the perimeter less than 88 feet?

16) Claire has received scores of 85, 88, 87, and 90 on her algebra tests. What score must she receive on the fifth test to have an overall test score average of at least 87?

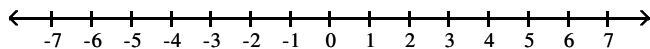
17) Claire has received scores of 85, 88, 87, and 85 on her algebra tests. What score must she receive on the fifth test to have an overall test score average of at least 88?

18) The length of a rectangle is 22 feet. For what widths is the perimeter less than 64 feet?

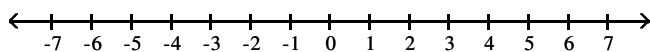
19) The length of a rectangle is 26 feet. For what widths is the perimeter less than 74 feet?

Express the solution set of the inequality in interval notation and graph the interval.

20) $x > -4$

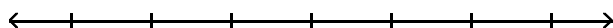


21) $x > -2$

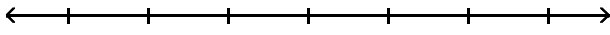


Solve the inequality and graph the solution set on a number line.

22) $\frac{y}{3} \leq -4$

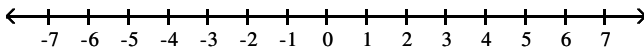


23) $\frac{y}{5} \leq -2$

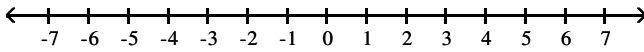


Express the solution set of the inequality in interval notation and graph the interval.

24) $x > -5$

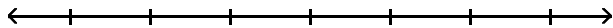


25) $x \leq -2$

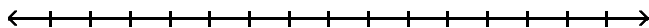


Solve the inequality and graph the solution set on a number line.

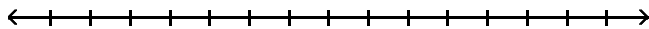
26) $\frac{x}{5} \leq -2$



27) $8 - 2x \geq -12$



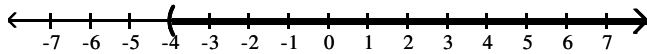
28) $2x + 5 < 3(x + 4)$



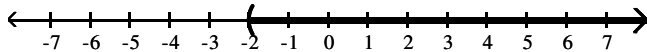
Answer Key

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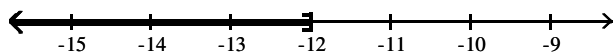
- 1) 4
- 2) $4x + 9x = 39$; 3
- 3) $7x - 5x = 18$; 9
- 4) $3x + (-7) = 10x$; -1
- 5) $7x - 4x = 21$; 7
- 6) 780 min
- 7) 1020 min
- 8) 45 sophomores; 27 juniors
- 9) 61 sophomores; 41 juniors
- 10) 128 miles
- 11) 500 miles
- 12) at least 95
- 13) at least 80
- 14) widths less than 10 ft
- 15) widths less than 14 ft
- 16) at least 85
- 17) at least 95
- 18) widths less than 10 ft
- 19) widths less than 11 ft
- 20) $(-4, \infty)$



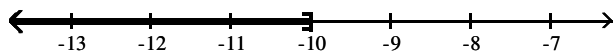
- 21) $(-2, \infty)$



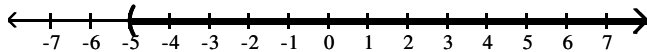
- 22) $(-\infty, -12]$



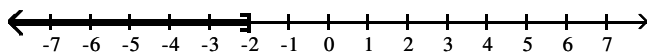
- 23) $(-\infty, -10]$



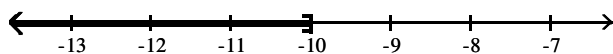
- 24) $(-5, \infty)$



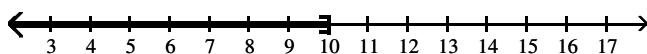
- 25) $(-\infty, -2]$



- 26) $(-\infty, -10]$



- 27) $(-\infty, 10]$



Answer Key

Testname: E01SEC2.1-2.6PRACTICEV03

28) $(-7, \infty)$

