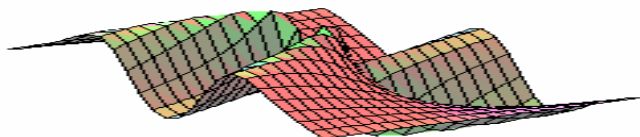


MA 104 INTRODUCTORY ALGEBRA

-A JUST IN TIME APPROACH-

PRACTICE TEST FOUR

Sections: 5.1, 5.2, 5.3, 5.4, 5.5, 8.7.



1- 5. Identify common factors and simplify. [5.1]

1) $5x + ax$

2) $a^2b - b^2 + a^2b^2$

3) $20x^2 - 15x^4y$

4) $3m - 9mn$

5) $y^2x + x^2y$

6-8. For the following identify the slope, m , and ratio of each. [5.1]

6. $C(m) = 15 + 0.20m$

7. $dA = \frac{45}{7}t + 25$

8. $y + \frac{1}{2}x - 3 = 0$

9. Arrange these facts into a unit analysis to find how many dollars per year are spent on 2 packs per day. [5.1]

20 packs per carton

\$35 per carton

365 days per year

10. On a trip to Canada, you pay \$0.85 Canadian per liter for gasoline. How much is this in U.S. dollars per gallon? Estimate first. [5.1]

1 Canadian dollar \approx 0.66 U.S. dollar

1.0567 quarts = 1 liter

4 quarts = 1 gallon

11 – 16. Solve each of the percent problems. [5. 2]

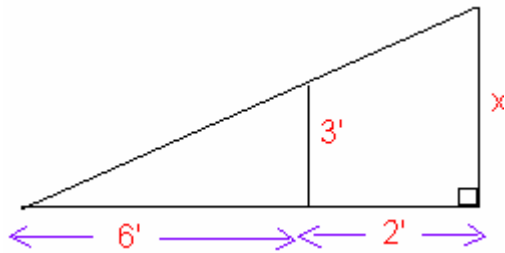
11. 68% is what percent of 72?
12. What percent of 22 is 18?
13. 8% of what number is 240?
14. 296 is 16% of what number?
15. Find 160% of 500.
16. 3.8% of 600 is what?

17- 18. For the following exercise solve for x. [5. 2]

17) $\frac{5x-1}{9} = \frac{x+7}{3}$

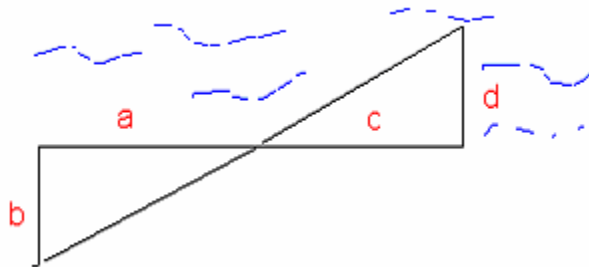
18) $\frac{5x}{2} - 1 = \frac{14}{3} + x$

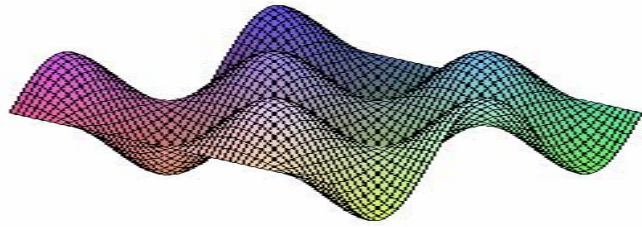
In exercise 19-21, use proportion to find x in the following exercise. [5. 3]



20. When a tree 18ft tall casts a shadow of 54 feet long, how long a shadow is cast by a person 6 feet tall? [5. 3]

21. In the diagram below, similar triangles can be shown to determine the distance across the river. Let d be the distance across the river. (Hint use proportion)
If $a = 30$ ft, $b = 70$ ft, and $c = 20$ ft. Solve for d . [5. 3]





22. Find the mean and median of the following hourly wage of six employees of the Hamilton House of Pizza: \$5.00, \$4.50, \$3.95, \$4.90, \$7.00, \$13.65.

b) What is the five number summaries of the above data?

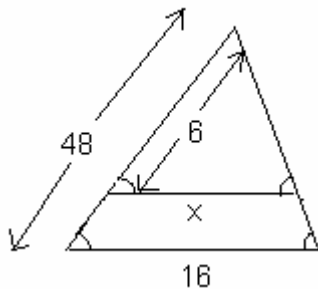
23. Compute the mode (s), median, and mean of the set for the following data set:

2, 5, 1, 4, 9, 8, 7 [5. 4]

24. A staircase needs to have a slope of 7.5 to 15. What horizontal distance is needed for an 8.5-foot vertical distance between floors? [5. 2]

25. The angle measures in a triangle are in the ratio 1:1:2. The sum of the angle measurements is 180° . What is the measure of each angle? [5. 1]

26. What is the length of the line labeled x in the triangle? [5. 3]



27. How many pounds of dog food A, containing 16% protein, need to be blended with dog food B, containing 5% protein, to obtain a 500-pound blend with 7% protein? [5. 5]

