

**Algebra in-class worksheet TO BE HANDED IN AND GRADED!**  
**Chapter 2.1: Linear Equations, Functions, and Models**

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

Warm-up problems: *Solve each equation*

19.  $7(3x + 6) = 11 - (x + 2)$

20.  $4(5y + 3) = 3(2y - 5)$

21.  $3(x + 1) = 5 - 2(3x + 4)$

22.  $4(3x + 2) - 7 = 3(x - 2)$

23.  $2(x - 4) = 3 - 5(2x + 1)$

Select word-problems. *Express the information as an equation and solve.*

33. *Amount Borrowed.* Tamisha borrowed money from her father at 5% simple interest to help pay her tuition at Wellington Community College. At the end of 1 yr, she owed a total of \$1365 in principal and interest. How much did she borrow?
35. *Sales Commission.* Ryan, a consumer electronics salesperson, earns a base salary of \$1500 per month and a commission of 8% on the amount of sales he makes. One month Ryan received a \$2284 paycheck. Find the amount of his sales for the month.
37. *Cab Fare.* City Cabs charges a \$1.75 pickup fee and \$1.50 per mile traveled. Diego's fare for a cross-town cab ride is \$19.75. How far did he travel in the cab?

43. *Soccer Field Dimensions.* The width of the soccer field recommended for players under the age of 12 is 35 yd less than the length. The perimeter of the field is 330 yd. (*Source:* U.S. Youth Soccer) Find the dimensions of the field.
47. *Train Speeds.* The speed of an Amtrak passenger train is 14 mph faster than the speed of a Central Railway freight train. The passenger train travels 400 mi in the same time it takes the freight train to travel 330 mi. Find the speed of each train.
53. *Investment Income.* Erica invested a total of \$5000, part at 3% simple interest and part at 4% simple interest. At the end of 1 yr, the investments had earned \$176 interest. How much was invested at each rate?

Find the zero of the linear function

69.  $f(x) = -x + 6$

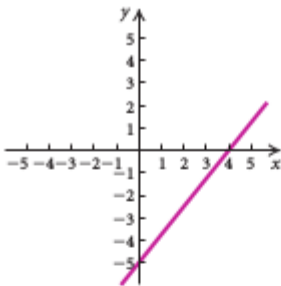
71.  $f(x) = 20 - x$

73.  $f(x) = x - 6$

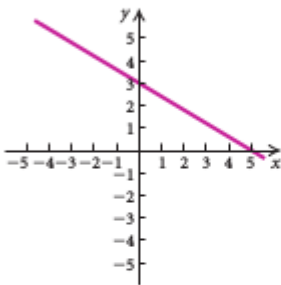
75.  $f(x) = -x + 15$

Find the  $x$  intercept and zero of the following graphs

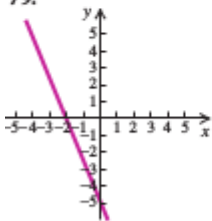
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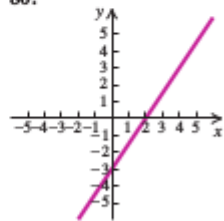
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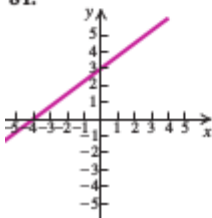
79.



80.



81.



82.

