4-2 Writing Equations in Slope-Intercept Form

Write an equation of the line that passes through the given point and has the given slope.

10. (3, 1), slope 2

12. (1, 0), slope 1

14. (2, 5), slope −2

Write an equation of the line that passes through each pair of points.

16. (9, −2), (4, 3)

18. (−5, 3), (0, −7)

20. (−1, −3), (−2, 3)

22. **APPLY MATH** Greg is driving a remote control car at a constant speed. He starts the timer when the car is 5 feet away. After 2 seconds the car is 35 feet away.
a. Write a linear equation to find the distance *d* of the car from Greg.
b. Estimate the distance the car has traveled after 10 seconds.

32. **GYM MEMBERSHIPS** A local recreation center offers a yearly membership and charges an additional fee for aerobics classes as shown in the table.

Number of classes (*x*)	1	5	10	15
Total cost (*y*)	270	290	315	340

a. Write an equation that represents the total cost of the membership.
b. Carly spent $500 one year. How many aerobics classes did she take?

Write an equation of the line that passes through the given points.

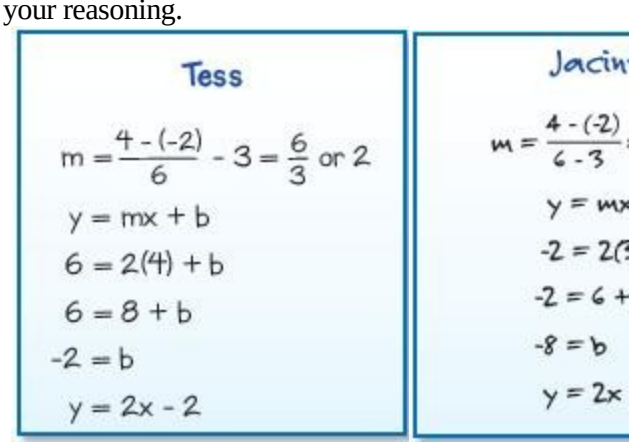
36. $\left(\frac{5}{4}, 1\right), \left(-\frac{1}{4}, \frac{3}{4}\right)$

37. $\left(\frac{5}{12}, -1\right), \left(-\frac{3}{4}, \frac{1}{6}\right)$

45. **CONCERT TICKETS** Jackson is ordering tickets for a concert online. There is a processing fee for each order, and the tickets are $76 each. Jackson ordered 5 tickets and the cost was $398.
a. Determine the processing fee. Write a linear equation to represent the total cost *C* for *t* tickets.
b. Make a table of values for at least three other numbers of tickets.
c. Graph this equation. Predict the cost of 8 tickets.

46. **MULTI-STEP** Ricky is saving money to buy a TV listed at $936. He currently has $40. He charges $20 for every lawn he mows, and he spends about $6 in gas for every three lawns. He also has a paper route, which earns him $45 per month.
a. In how many weeks will he have enough money if he mows three lawns per week?
b. Explain your solution process.
c. What assumptions did you make?

47. **ERROR ANALYSIS** Tess and Jacinta are writing the line through (3, −2) and (6, 4). Is either of them c your reasoning.



48. **PROBLEM SOLVING** Consider three points, (3, 7), (−6, 1) and (9, *p*), on the same line. Find the value of *p* and explain your steps.