5.2 Use Linear Equations in Slope-Intercept Form

Key Vocabulary

- y-intercept, p. 225
- slope, p. 235
- slope-intercept form, p. 244

KEY CONCEPTFor Your NotebookWriting an Equation of a Line in Slope-Intercept FormSTEP 1Identify the slope m. You can use the slope formula to calculate

- the slope if you know two points on the line.
- **STEP 2** Find the *y*-intercept. You can substitute the slope and the coordinates of a point (x, y) on the line in y = mx + b. Then solve for *b*.

STEP 3 Write an equation using y = mx + b.

Skill #6: Write an equation of the line given a slope and a point on the line.

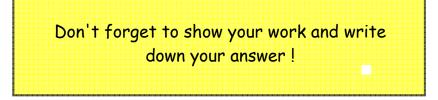
EXAMPLE 1 Write an equation given the slope and a point

Write an equation of the line that passes through the point (-1, 3) and has a slope of -4.

Your Turn !

You Try: Skill #6

Write an equation of the line that passes through the point (6, 3) and has a slope of 2.



Skill #7: Write an equation of the line given two points on a line.

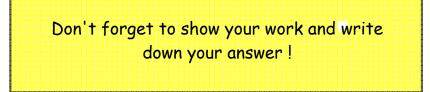
EXAMPLE 2 Write an equation given two points

Write an equation of the line that passes through (-2, 5) and (2, -1).

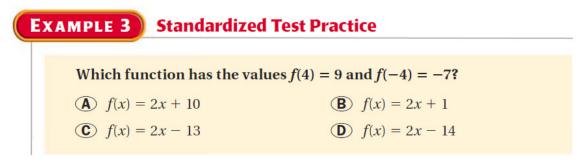
Your Turn !

You Try: Skill #7

Write an equation of the line that passes through (1, -2) and (-5, 4)



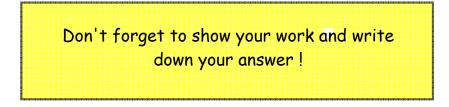
Skill #8: Write an equation of the line given two points on a line in function notation.



Your Turn !

You Try: Skill #8

Write an equation for the linear function with the values f(-2) = 10 and f(4) = -2.



Skill #9: Model a real - world situation given a constant rate of change and a data point.

Skill #10: Model a real - world situation given two data points.

We will come back to work with word problems !

Please Don't Forget to Enter Your Answers for the "You Try" examples in the form below!