Chapter 6B Practice Test (Sections 6.3, 6.4, 6.6)

Short Answer

1. The grocery store sells kumquats for $4.25 a pound and Asian pears for $2.25 a pound. Write an equation in standard form for the weights of kumquats k and Asian pears p that a customer could buy with $18.

2. The grocery store sells apples for $5.00 a pound and bananas for $3.50 a pound. Write an equation in standard form for the weights of apples a and bananas b that a customer could buy with $20.

3. At the beginning of the year, you have a balance of $200 in your bank account. Each month you deposit $50.
   (a) Write an equation for this situation.

   (b) Use the equation to find the balance in September. Hint: September is the 9th month.

4. In February, you have a balance of $270 in your bank account. Each month you take out $45.
   (a) Write an equation for this situation.

   (b) Use the equation to find the balance in June. Hint: June is the 6th month.

   Are the graphs of the lines in the pair parallel? Show work to back up your answer.

5. $y = \frac{1}{6}x + 8$ Circle your answer: YES   NO
   $-2x + 12y = -11$

6. $y = 5x + 6$ Circle your answer: YES   NO
   $-18x + 3y = -54$

7. $y = x - 19$ Circle your answer: YES   NO
    $-2x + 2y = -3$

Write an equation for the line that is *parallel* to the given line and that passes through the given point.

8. $y = -5x + 3; (-6, 3)$

9. $y = \dfrac{3}{4}x - 9; (-8, -18)$

Tell whether the lines for each pair of equations are *parallel*, *perpendicular*, or *neither*.

10. $7x - 4y = 4$
    $x - 4y = 3$

11. $y = -\dfrac{1}{2}x - 11$
    $16x - 8y = -8$

Write the equation of a line in slope-intercept form that is *perpendicular* to the given line and that passes through the given point.

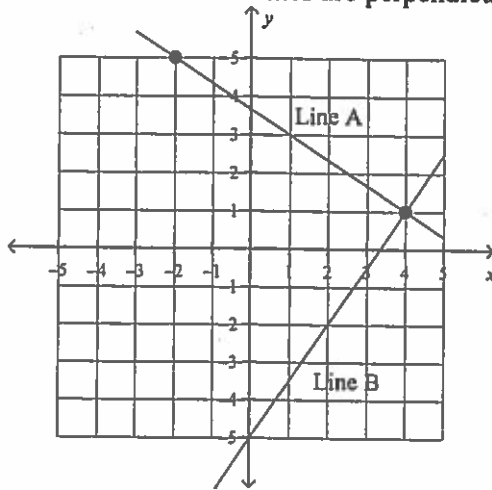12. $4x - 12y = 2; (10, -1)$

13. $y = \dfrac{2}{3}x + 9; (-6, 5)$

14. $y = \frac{3}{5}x + 5$; (9, -4)

15. $3x + 12y = -3$; (6, 3)

16. Assume that the two lines are perpendicular.

a. Find the slope of line A.

b. Find the slope of line B.

c. Find a point-slope equation for line A.

d. Find a slope-intercept equation for line B.