MAT1033 **Test 1**
Mr. Foley

Name_____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

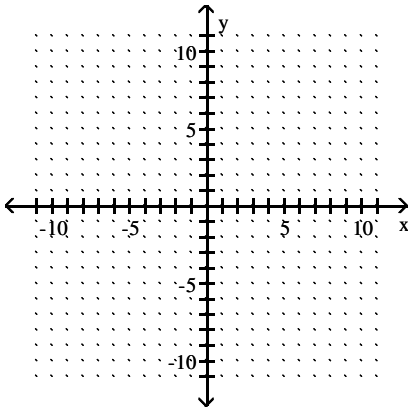
Decide whether the pair of lines is parallel, perpendicular, or neither.

1) $3x - 4y = -14$ and $8x + 6y = -13$

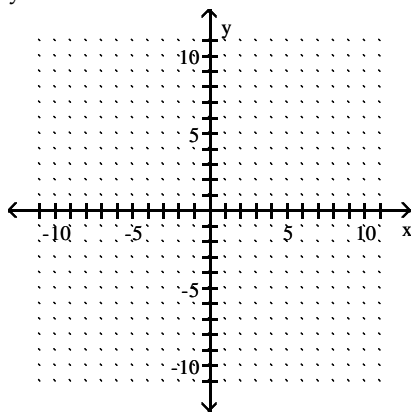
2) The line through (–20, 5) and (–4, 7) and the line through (–5, 5) and (7, 4)

Graph the linear equation.

3) $6x = y - 1$



4) $y + 2 = 0$



Find the slope and the y–intercept of the line.

5) $4x + 5y = 27$

Solve the problem.

6) A sum of money amounting to $3.35 consists of dimes and quarters. If there are 23 coins in all, how many are quarters?

7) Ron and Kathy are ticket–sellers at their class play. Ron is selling student tickets for $1.00 each, and Kathy selling adult tickets for $4.50 each. If their total income for 21 tickets was $59.50, how many tickets did Ron sell?

8) How many liters (L) of a 20% alcohol solution must be mixed with 90 L of a 70% solution to get a 40% solution?

Solve the system by elimination.

9) $2x - 6y = 5$
$-6x + 18y = 15$

Solve by the substitution method.

10) $x - 7y = -47$
$-6x - 8y = -18$

11) $x + y = 4$
$5x + 5y = 20$

Write the slope–intercept form of the equation for the line passing through the given pair of points.

12) (3, 0) and (–5, –9)

Solve the system by elimination.

13) $-7x + 6y = -49$
$3x - 3y = 21$

Find the slope of the line going through the given pair of points.

14) (3, 6) and (8, 6)

15) (–6, 4) and (–5, –9)

Decide whether or not the ordered pair is a solution of the system.

16) (5, –2)

$3x + y = 13$

$2x + 3y = 4$

Find an equation of the line that satisfies the conditions. Write the equation in standard form.

17) Through (0, 4); $m = -\frac{8}{9}$

Find the intercepts for the graph of the equation.

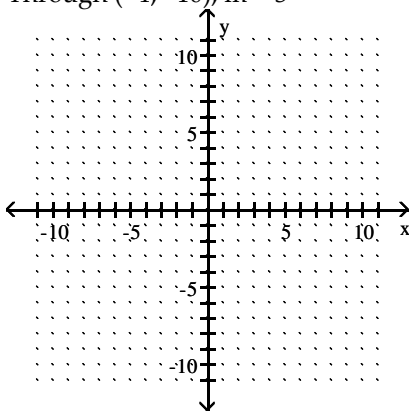
18) $-2x + y = 4$

Solve the system by the elimination method.

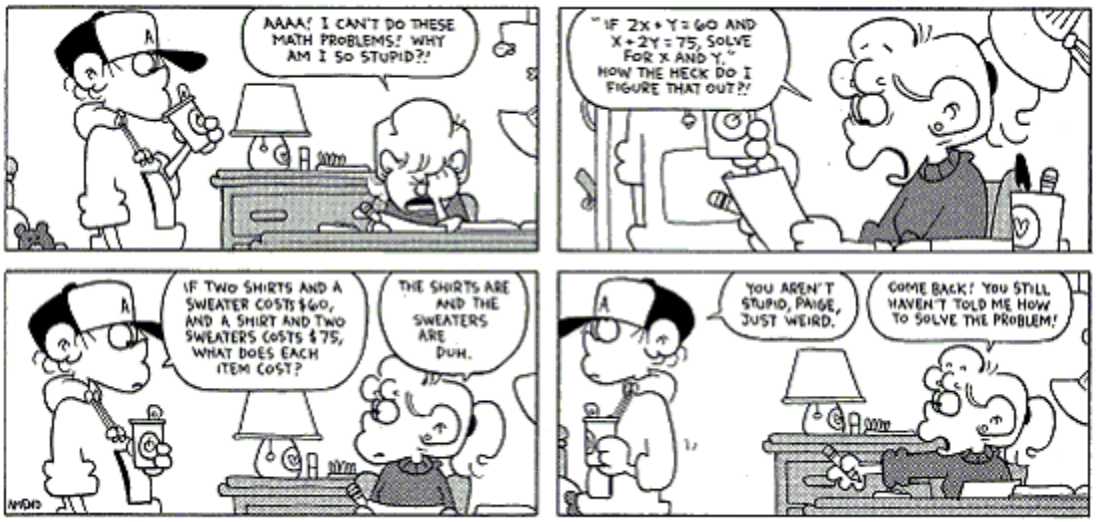
19) $8x + 5y = 25$
$-3x + 2y = 10$

Graph the line described.

20) Through (–4, –10); m = 3

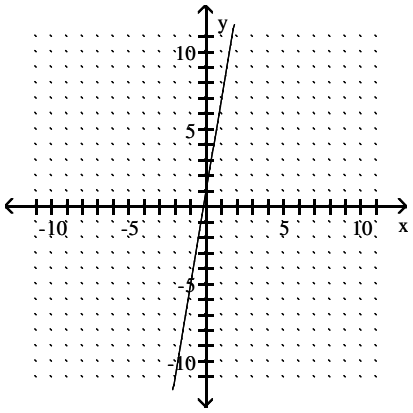


21) How much does a single shirt cost? How much does a sweater cost?

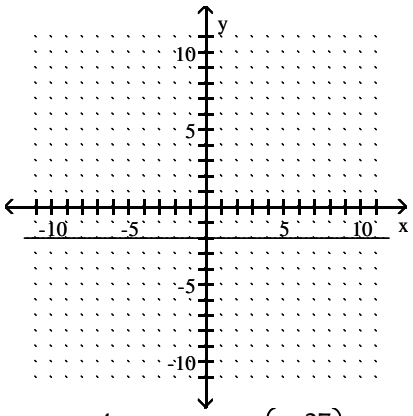


Answer Key
Testname:

1) Perpendicular
2) Neither
3)

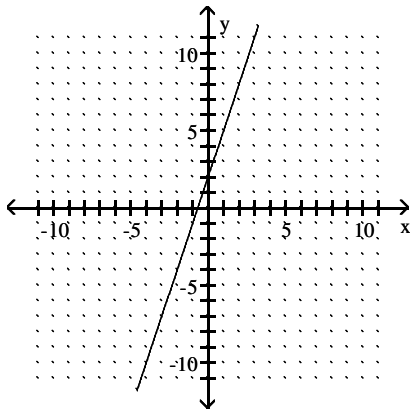


4)



5) Slope $-\frac{4}{5}$; y–intercept $\left(0, \frac{27}{5}\right)$
6) 7 quarters
7) 10 tickets
8) 135 L
9) ∅
10) {(–5, 6)}
11) {(x, y) | x + y = 4}
12) $y = \frac{9}{8}x - \frac{27}{8}$
13) {(7, 0)}
14) 0
15) – 13
16) Yes
17) 8x + 9y = 36
18) (– 2, 0) (0, 4)
19) {(0, 5)}

20)



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