Math 084 W2010 Worksheet 4.3 v01
Slope Exercises
Dressler

Name_____

Find the slope of the line passing through the pair of points or state that the slope is undefined.

1) (9, 6) and (5, 5)

2) (1, 9) and (–8, –9)

3) (–13, 13) and (15, 5)

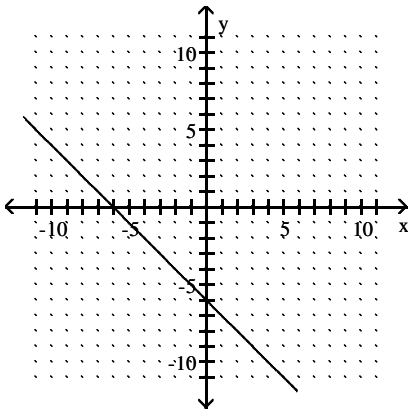
4) (–2, –7), (4, –6)

5) (9, –3) and (9, –7)

6) (–2, 9) and (1, 9)

Find the slope of the line, or state that the slope is undefined.

7)



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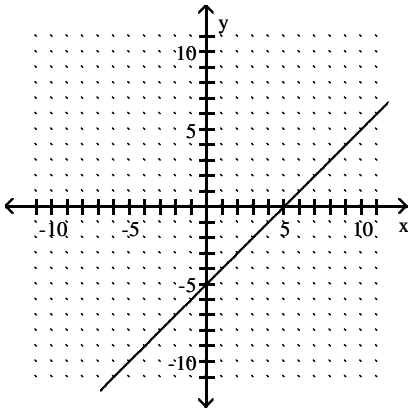

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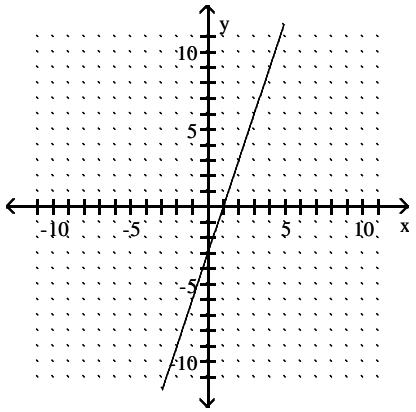

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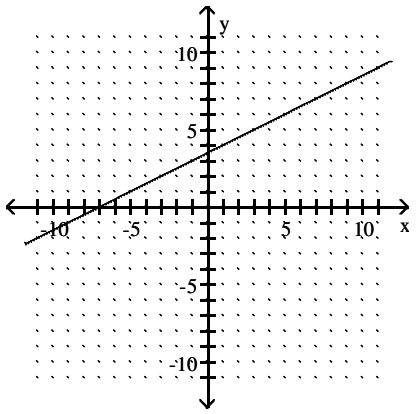

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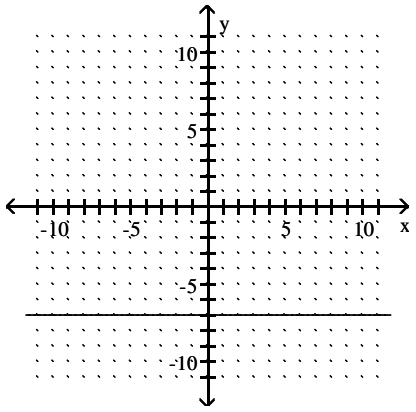

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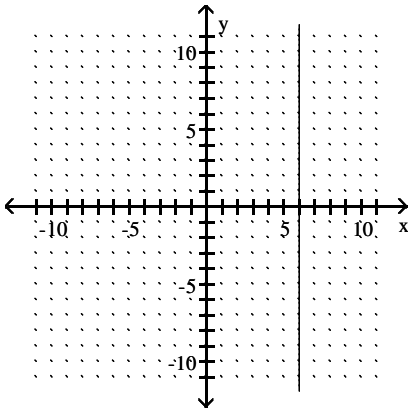


Provide an appropriate answer.

13) Determine whether the points whose coordinates are (3, –3), (2, –2), and (1, –1) lie on a line.

Determine whether the lines through each pair of points are parallel.

14) (2, 5) and (–14, 3); (1, –2) and (–7, –3)

15) (–9, 0) and (7, –20); (2, –7) and (10, –17)

16) (2, 7) and (20, –11); (5, 2) and (–4, –7)

17) (–1, 9) and (13, 9); (7, 3) and (14, 3)

18) (–3, 3) and (17, 9); (3, –4) and (13, –1)

Provide an appropriate answer.

19) Determine whether the points whose coordinates are (–2, 1), (–4, 3), (–6, –1), and (–8, 1) are the vertices of a four–sided figure whose opposite sides are parallel. (Such a figure is called a parallelogram.)

Determine whether the lines through each pair of points are perpendicular.

20) (–5, 7) and (–19, 25); (3, 9) and (–4, 18)

21) (8, –2) and (20, –6); (–4, –10) and (–6, –4)

22) (5, –7) and (–3, –13); (0, –7) and (3, –11)

23) (7, 0) and (3, –2); (–8, –7) and (–10, –8)

24) (–5, –10) and (–3, –14); (5, –6) and (4, –8)

25) (–8, 3) and (–18, –1); (–5, 9) and (–7, 14)

26) (6, 7) and (4, 13); (–7, 3) and (–4, 2)

Determine whether the lines through each pair of points are parallel, perpendicular, or neither.

27) (8, 7) and (4, –9); (7, 4) and (5, –4)

28) (1, 8) and (17, 12); (–8, 7) and (–6, 15)

29) (2, 6) and (–14, –4); (3, –8) and (8, –16)

30) (9, 0) and (–11, 8); (–8, 2) and (–18, 6)

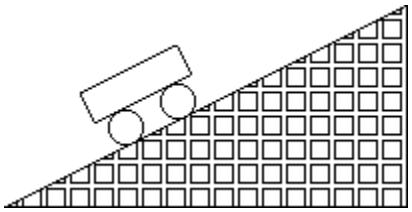
31) (9, 3) and (–9, 7); (–1, –6) and (8, –4)

32) (–3, 5) and (–9, –5); (6, 7) and (1, 10)

33) (–3, –7) and (–13, –13); (–9, –2) and (–12, –7)

Solve.

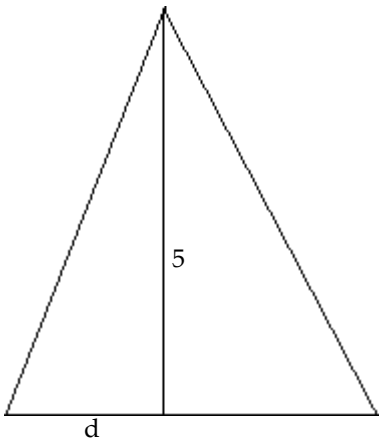
34) A section of roller coaster track has the dimensions shown in the diagram. Find the grade of the track, which is the slope written as a percent.



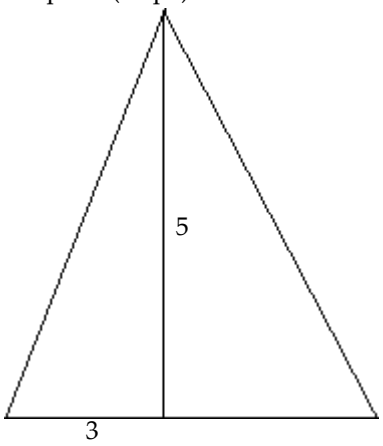
11.61 met

27 meters

35) A tent has the dimensions shown in feet. Find d so that the pitch of the left side of the roof is $\frac{5}{3}$.



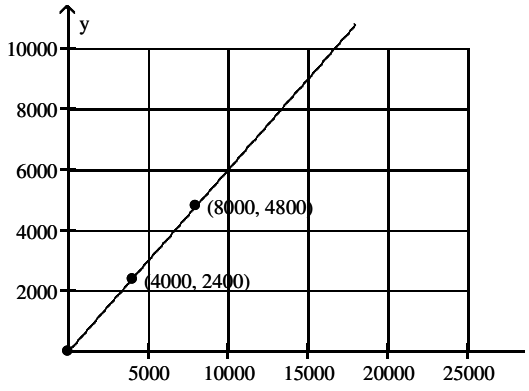
36) A tent has the dimensions shown in feet. Find the pitch (slope) of the left side of the roof.



37) The approach ramp used by a daredevil motorcyclist for flying over a collection of flaming barrels of oil has a rise of 70 feet for every 100 feet in horizontal distance. Find the grade of the ramp. Round to the nearest whole percent.

Find the slope of the line and write the slope as a rate of change. Don't forget to attach the proper units.

38) The graph shows the total cost y (in dollars) of owning and operating a mini–van where x is the number of miles driven.



1) $\frac{1}{4}$
2) 2
3) $-\frac{2}{7}$
4) $\frac{1}{6}$
5) undefined
6) 0
7) –1
8) 1
9) 3
10) $\frac{1}{2}$
11) 0
12) Undefined
13) The points lie on a line.
14) parallel
15) parallel
16) not parallel
17) parallel
18) parallel
19) The figure is a parallelogram.
20) not perpendicular
21) not perpendicular
22) perpendicular
23) not perpendicular
24) not perpendicular
25) perpendicular
26) not perpendicular
27) parallel
28) neither
29) perpendicular
30) parallel
31) neither
32) perpendicular
33) neither
34) 43%
35) 3 feet
36) $\frac{5}{3}$
37) 70%
38) $0.60 per mile