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* **5-36.** Which of the triangles below are similar to ∆*LMN* at right? How do you know? Explain. [Hints](http://www.cpm.org/students/homework/GC_Problems/GC_Ch5_Answers/GC5.1.4/GC_5_36.html%22%20%5Co%20%22Java%20Required%22%20%5Ct%20%22_blank)⇔[Help](http://www.cpm.org/students/homework/GC_Problems/GC_Ch5_Answers/GC5.1.4/GC_5_36m.html)
	1. b.

c.d.

**5-37.** Find the equation of the line that has a 33.7° slope angle and a *y*-intercept at (0, 7). Assume the line has a positive slope. [Hints](http://www.cpm.org/students/homework/GC_Problems/GC_Ch5_Answers/GC5.1.4/GC_5_37.html%22%20%5Co%20%22Java%20Required%22%20%5Ct%20%22_blank)⇔[Help](http://www.cpm.org/students/homework/GC_Problems/GC_Ch5_Answers/GC5.1.4/GC_5_37m.html)

**5-38.** For each triangle below, write a trigonometric equation relating *a*, *b*, and *θ*. [Hints](http://www.cpm.org/students/homework/GC_Problems/GC_Ch5_Answers/GC5.1.4/GC_5_38.html%22%20%5Co%20%22Java%20Required%22%20%5Ct%20%22_blank)⇔[Help](http://www.cpm.org/students/homework/GC_Problems/GC_Ch5_Answers/GC5.1.4/GC_5_38m.html)

a.b.c.

* **5-39.** Kendrick is frantic. He remembers that several years ago he buried his Amazing Electron Ring in his little sister’s sandbox, but he cannot remember where. A few minutes ago he heard that someone is willing to pay $1000 for it. He has his shovel and is ready to dig. [Hints](http://www.cpm.org/students/homework/GC_Problems/GC_Ch5_Answers/GC5.1.4/GC_5_39.html%22%20%5Co%20%22Java%20Required%22%20%5Ct%20%22_blank)⇔[Help](http://www.cpm.org/students/homework/GC_Problems/GC_Ch5_Answers/GC5.1.4/GC_5_39m.html)
	1. The sandbox is rectangular, measuring 4 feet by 5 feet, as shown below. If Kendrick only has time to search in the 2 foot-square shaded region, what is the probability that he will find the ring?



* 1. What is the probability that he will not find the ring? Explain how you found your answer.
	2. Kendrick decides instead to dig in the square region shaded at right. Does this improve his chances for finding the ring? Why or why not?

* **5-40.** Estelle is trying to find *x* in the triangle at right. She lost her scientific calculator, but luckily her teacher told her that sin 23° ≈ 0.391, cos 23° ≈ 0.921, and tan 23° ≈ 0.424. [Hints](http://www.cpm.org/students/homework/GC_Problems/GC_Ch5_Answers/GC5.1.4/GC_5_40.html%22%20%5Co%20%22Java%20Required%22%20%5Ct%20%22_blank)⇔[Help](http://www.cpm.org/students/homework/GC_Problems/GC_Ch5_Answers/GC5.1.4/GC_5_40m.html)
	1. Write an equation that Estelle could use to solve for *x*.
	2. Without a calculator, how could Estelle find sin 67°? Explain.