Review & Preview

5-36.   Which of the triangles below are similar to $\triangle LMN$ at right?
         How do you know? Explain.

a.   b.   c.   d.
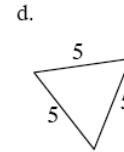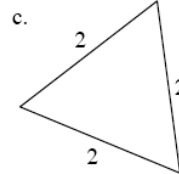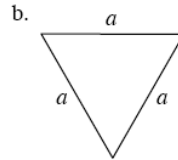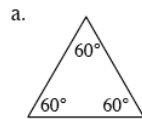
5-37.   Find the equation of the line that has a 33.7° slope angle and a y-intercept at $(0, 7)$.
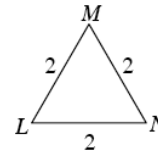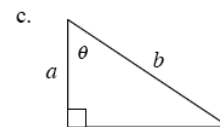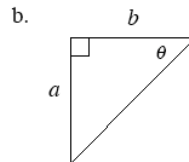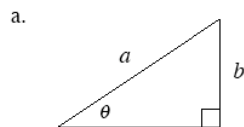   Assume the line has a positive slope.

5-38.   For each triangle below, write a trigonometric equation relating a, b, and θ.

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.

a.   The sandbox is rectangular, measuring 4 feet by 5
     feet, as shown at right. If Kendrick only has time
     to search in the 2 foot-square shaded region, what
     is the probability that he will find the ring?
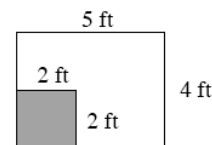

b.   What is the probability that he will not find the
     ring? Explain how you found your answer.

c.   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?
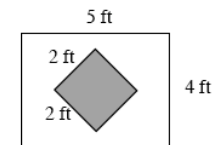
5-40.   Estelle is trying to find x in the triangle at right.
         She lost her scientific calculator, but luckily her
         teacher told her that $\sin 23° \approx 0.391$,
         $\cos 23° \approx 0.921$, and $\tan 23° \approx 0.424$.
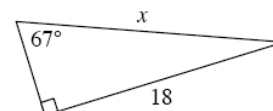
a.   Write an equation that Estelle could use to
     solve for x.

b.   Without a calculator, how could Estelle find $\sin 67°$? Explain.