Show all work neatly, and circle your answers.
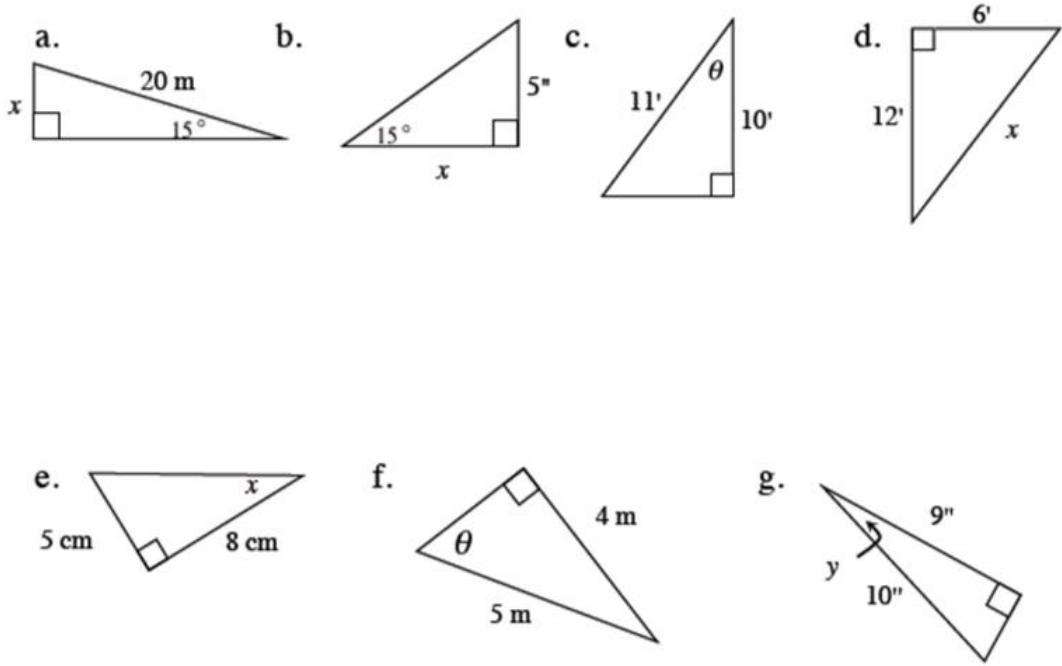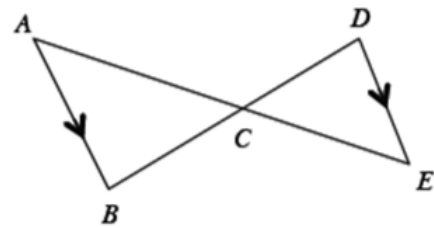
CL 5-139.   For each diagram, write an equation and solve to find the value for each
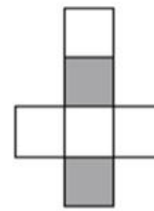variable.

a.
20 m
x
15°

b.
5"
15°
x

c.
θ
11'
10'

d.
6'
12'
x

e.
x
5 cm   8 cm

f.
4 m
θ
5 m

g.
9"
y
10"

CL 5-140.   ~~Copy the diagram at right onto your paper.~~

a.   Are the triangles similar? If so,
show your reasoning with a
flowchart.

b.   If $m\angle B = 80°$, $m\angle ACB = 29$,
$AB = 14$, and $DE = 12$, find CE.

A   D

C

E

B

CL 5-141.   STEP RIGHT UP!

At a fair, Cyrus was given the following opportunity.
He could roll the die formed by the net at right one
time. If the die landed so that a shaded die faced up,
then Cyrus would win $10. Otherwise, he would lose
$5. Is this game fair? Explain how you know.

CL 5-142.   Use your knowledge of special right triangles to find the missing side
lengths and angle measures exactly. No calculators are needed.

a.

45
45
2 cm

b.

8
4

c.

6 m
60°
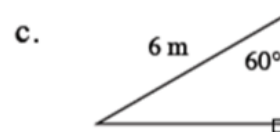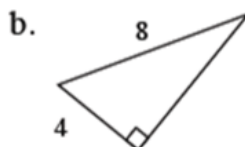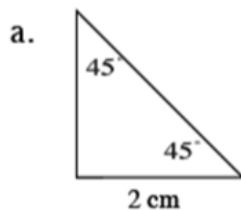
CL 5-143.   While working on homework, Zachary was finding the
value of each variable in the diagrams below. His first step
for each problem is shown under the diagram. If his first
step is correct, continue solving the problem to find the
solution. If his first step is incorrect, explain his mistake
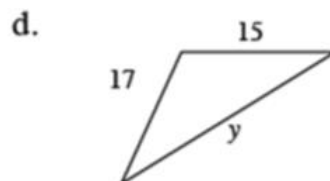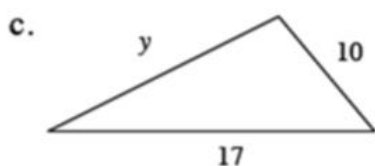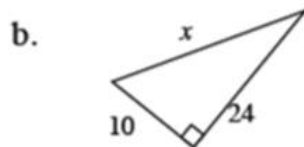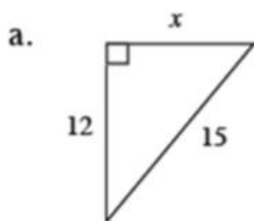and solve the problem correctly.

a.

x
16°   63°
10

$\sin 16° = \dfrac{x}{10}$

b.

50°   70
10
x
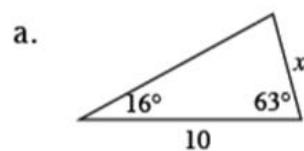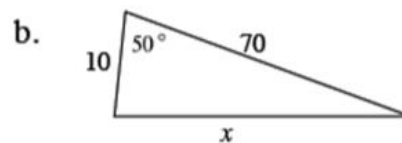
$x^2 = 10^2 + 70^2 - 2(10)(70)\cos 50°$

CL 5-144. In parts (a) and (b), use what you know about Pythagorean Triples to find the third side quickly. In parts (c) and (d), give all possible lengths for the third side of the triangle. You should give the answers on (c) and (d) as a range of values.

a.

b.

c.

d.

CL 5-145. Kayla brought snacks for her and her partner on the volleyball team. She packed flavored water (2 berry and 4 citrus), fruit (5 apricots, 2 apples, and 3 bunches of grapes), and small packages of crackers (2 regular and 2 whole wheat). Kayla will randomly choose one flavored water, one fruit, and one package of crackers.

   a.   Show all the possible combinations of three snacks that Kayla could choose.

   b.   What is the probability that Kayla will choose a high-fiber snack (any combination that includes both an apple and whole-wheat crackers).

CL 5-146. Examine the triangle at right. Solve for x *twice* using two different methods.
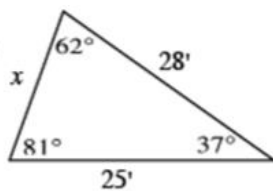
CL 5-147. Graph the points $(3, -4)$ and $(7, 2)$ on graph paper and draw the line segment and a slope triangle that connects the points. Find:

a. The length of the segment.

b. The slope of the line segment.

c. The area of the slope triangle that connects the points.

d. The measure of the slope angle.
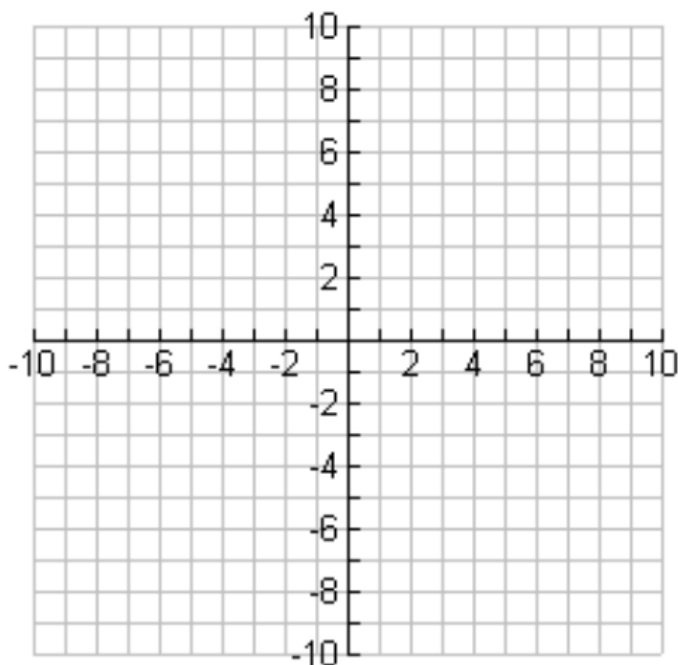
CL 5-148. ~~Trace the figure at right onto your paper and then~~ perform all of the transformations listed below on the same diagram. Then find the perimeter of the final shape.

- Reflect $\triangle ABC$ across $\overline{AB}$.

- Rotate $\triangle ABC$ 180° around the midpoint of $\overline{BC}$.

- Reflect $\triangle ABC$ across $\overline{AC}$.
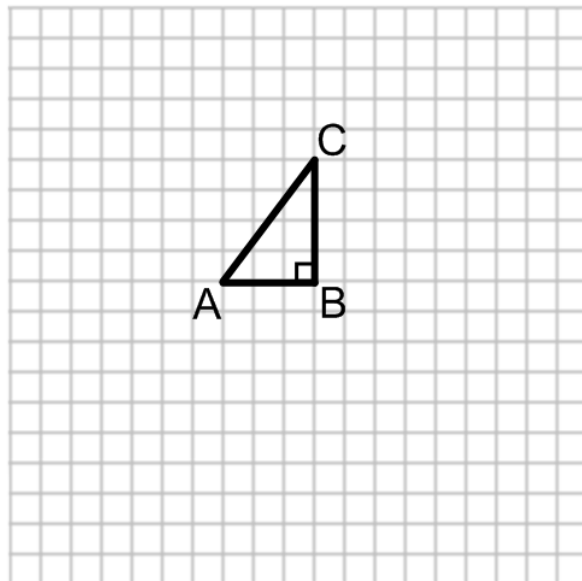
CL 5-149. A snack cracker company surveyed 1000 people, in different age groups, to determine their favorite cracker.

Age of Participants (years)

	Under 20	20 to 39	40 to 59	60 and over
# people	250	250	250	250

Favorite Cracker

	Cracker A	Cracker B	Cracker C
# people	371	308	321

a. What is the probability (represented as a percent) that a randomly selected participant was 20 years old or older?

b. 152 of the participants under 20 years old chose cracker A as their favorite. Calculate the probability that a participant chose cracker A *or* was under 20 years old.

c. What is the probability that a participant did not choose cracker A *and* was 20 or over years old? Show how you used a complement to answer this problem.

CL 5-150.   The following questions are part of the grade for this packet – do not skip them! Take a few minutes to reflect on the closure packet, as well as the work you have done in this chapter. Be complete and specific in your answers. If there are things that you need help with, be sure to **SEE YOUR TEACHER OR GO TO MATH HELP BEFORE THE DAY OF THE TEST!**

Which **problems** in the closure packet do you feel confident about?

Which **problems** were difficult?

Make a list of **topics** from the chapter that you feel **you need to practice more**.

Make a list of **topics** from the chapter you feel **you need help with**.