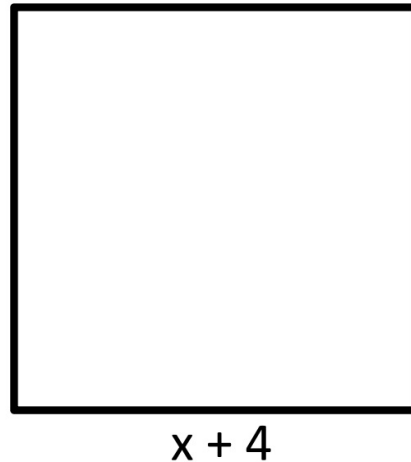# Applications of Equations
Part 1
Geometry Connections

Ex 1: The following square has a side lengh of x + 4 and a perimeter of 28.
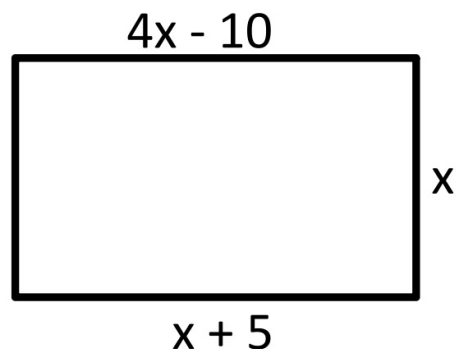
a) Find the value of x.

b) Find the length of a side

x + 4

c) Find the area.

Ex 2: In the rectangle below two side lengths are given. Find the value of x.

a) Find the value of x.

4x - 10

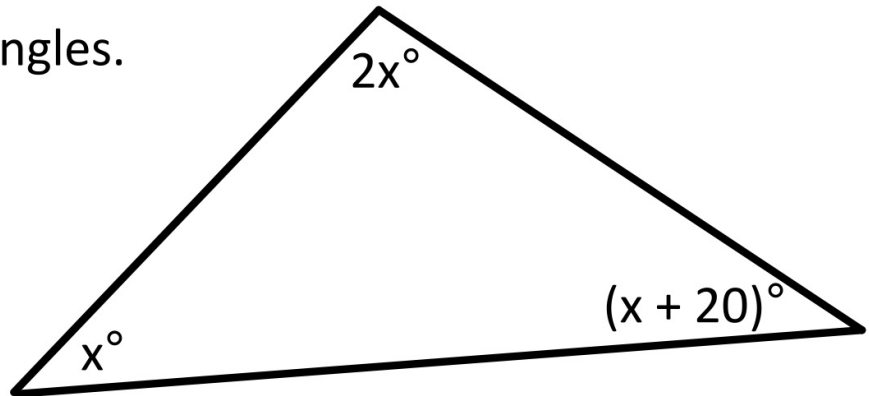b) Find the length of the rect.

x

b) Find the length of the rect.

x + 5

c) Find the perimeter

d) Find the area

Ex 3: The sum of the angles of a triangle are equal to 180°.

a) Find the value of x.

b) Find the 3 angles.

$2x°$

$(x + 20)°$

$x°$

Ex 4: The perimeter of the given rectangle is 54 in.

a) Find the value of x.

b) Find the length & width.

c) Find the area.

x

x + 3

Ex 5: Three consecutive integers have a sum of -51.

a) Assign the variables for each integer.

b) Write an equation and solve.

c) What are the three integers?

Ex 6: Three consectutive odd integers are such that two times the smallest is 21 more than the largest.

a) Assign the variables for each integer.

b) Write an equation and solve.

c) What are the three integers?

Ex 7: Darren's dad is 28 years older than Darren. The sum of their ages is 64. Find their ages.

   a) Assign the variables for each.

   b) Write an equation and solve.

   c) What are the ages?

Ex 8: Michael is on his way home to Fort Wayne for a family reunion. It is a 360 mile trip. He drives 65 mph for 3 hours. When the speed limit changes, he slows down to 55 mph for the rest of the trip. How long does Michael drive at 55 mph?

   a) Assign a variable for the unknown.

   b) Write out the equation and solve.