1. Write an expression for the following problems:

   a. 3 packages of cookies cost a dollars. How many dollars do 5 of the same packages cost?

   b. 5 bottles of juice cost b dollars. How many bottles can one buy with c dollars?

2. **Calculate:**

$$\frac{3}{5} : \frac{27}{45} =$$

$$\frac{14a}{48} : \frac{8a}{42} =$$

$$\frac{3}{5} : \frac{11}{5} =$$

$$\frac{9}{10} \times \frac{5}{12} =$$

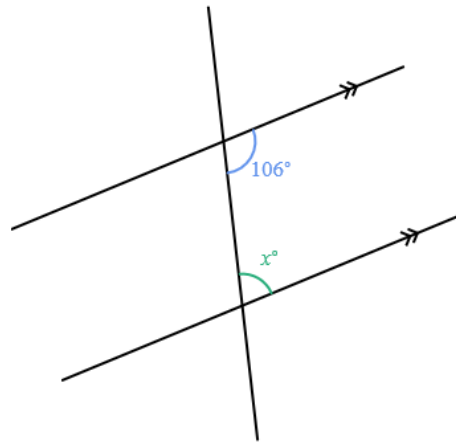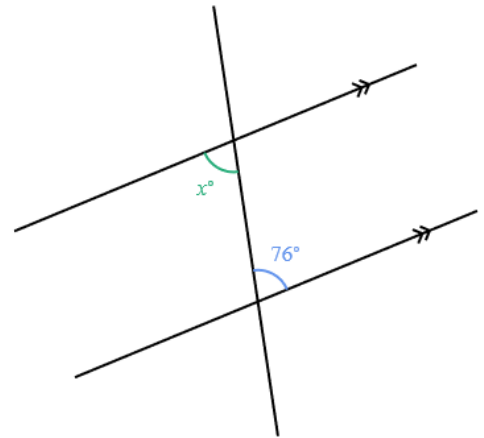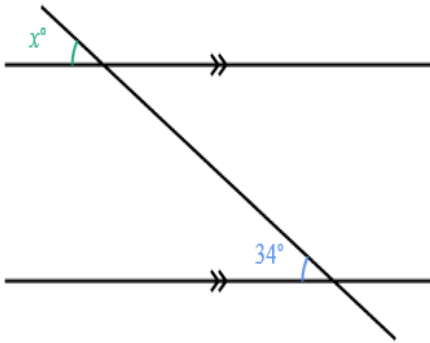3. **Solve the following equations (hint: do the substitution):**

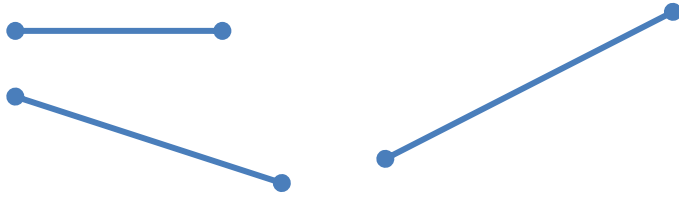$a)\ (15 - y) \times 8 = 48$

$b)\ 250 \div (x + 12) = 10$

4. In a zoo there are birds (they have 2 legs each) and mammals with 4 legs each. How many birds and mammals are in the zoo, if they have 6000 legs and 2500 heads altogether? (use substitution)
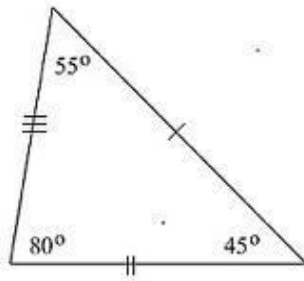
Geometry:

Find the missing angles
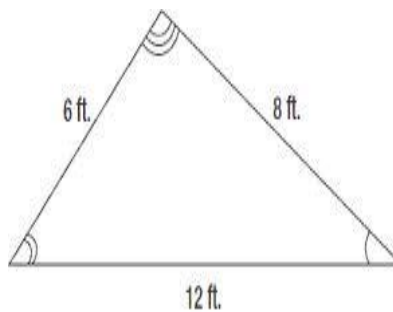

$x°$

$34°$

$x°$

$76°$

$106°$

$x°$

How to construct a triangle with sides equal to three line segments:

For the given triangles make the correct fit of angles and sides.
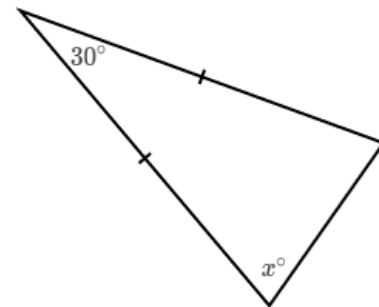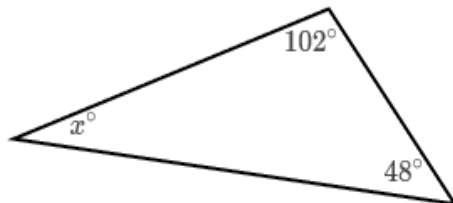

a) 15cm, 10cm, 8cm

b) 44°,70°, ?

c) 35°, 65°, ?

Find x

There are 80 penguins in a zoo and $\frac{3}{4}$ of them love tuna. While 47 penguins love red tuna, only 42 love yellow tuna. How many penguins love both kinds of tuna?
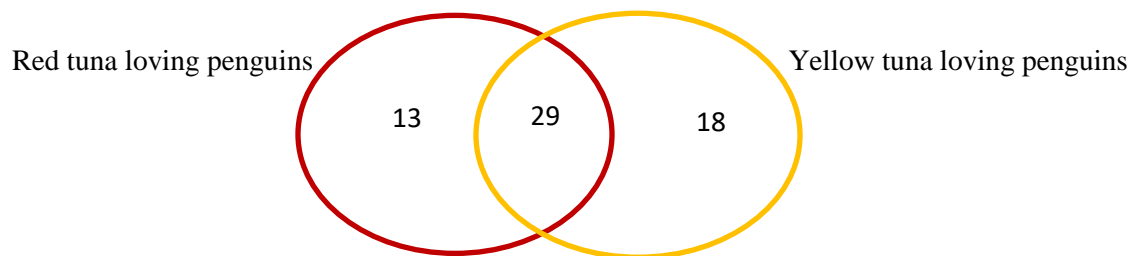
How many penguins love tuna in all? $\frac{3}{4}$ *of* 80 *which can be calculated by* $\frac{3}{4}$ x80=60

60-47=13 (13 do not love yellow tuna)
60-42=18 (18 do not love red tuna)
13+18=31 (31 penguins love either red or yellow tuna)
60-31=29 (29 penguins love both types of tuna)

Red tuna loving penguins   Yellow tuna loving penguins

13   29   18

Short solution: 47+42=89   and then   89-60=29