1.5 Ratio and proportion

Student name: _____ Score: _____

1. Alexis and Bertrand share a sum of money in the ratio 3 : 5.
   Alexis receives $36.

   Work out how much Bertrand receives.

   $ ....60................................. [2]

2. The total cost of 2 kg of apples and 1.5 kg of pears is $9.70 .
   Apples cost $2.60 per kilogram.

   Find the cost of 1 kg of pears.

   $.................................3................................. [3]

3. The scale of a map is 1 : 250 000 .

   Find the actual distance, in kilometres, between two cities which are 42 cm apart on the map.

   Answer ....105................... km [2]

4. Sara and Klaus share some money in the ratio 5 : 4 .
   Klaus receives $48.

   Work out how much Sara receives.

   $ ....60................... [2]

5. $84 is divided in the ratio 3 : 4.

   Find the value of the largest share.

   $...................48................... [2]

6. Kim has a piece of rope 18 metres long.
   He cuts the rope into two pieces.
   The lengths of the pieces are in the ratio 1 : 5.

   Calculate the length of each piece.

   ....3................... m

   ....15................... m [2]

7. Divide 360 in the ratio 7 : 2.

   ....280............... , ...80............... [2]

8. A map is drawn to a scale of 1 cm to 5 km.

   (a) On the map, the distance between two towns is 4.8 cm.

   Find the actual distance between the towns.

   ....24..............................km [1]

   (b) An island has an area of 75 km².

   Find the area of the island on the map.

   ....3..............................cm² [2]

9. A travel agent displays the following exchange rates.

   £1 = $1.55
   £1 = ¥ 9.3

   (a) Change £200 into dollars ($).

   $ ....310.................................. [1]

   (b) Find the number of Chinese yuan (¥) received in exchange for $1.

   ¥....6................................. [2]

10. A travel agent has the following exchange rates.

   £1 = $1.25

   £1 = €1.20

   (a) Change £200 into dollars ($).

   $ .....250.............................. [1]

   (b) Change $100 into euros (€).

   € ......96.............................. [2]

11. Divide 96 cm in the ratio 5 : 3.

   ....60.............. cm , ...36.......... cm [2]

12. $144 is shared in the ratio 1 : 7.

   Find the value of the smaller share.

   $ ...18.............................. [2]

13. Divide 120 in the ratio 3 : 5.

   ....45............ , ...75.......... [2]
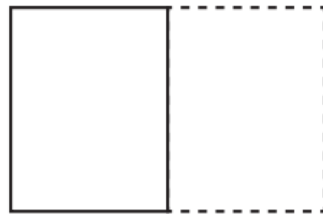
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14. A rectangular piece of paper has sides of length a cm and b cm.

a

b
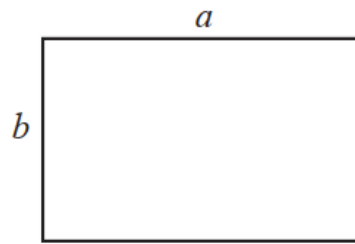
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The paper is cut in half.

The ratio of the length of the longer side to the length of the shorter side in both pieces of paper is the same.

Find a in terms of b.

$a =$ .... $b\sqrt{2}$ .... [3]

15. $126 is divided into 3 shares in the ratio $1:2:4$.

Find the value of the largest share.

$ .... 72 .... [2]