Basic Ratios and Proportion Practice #3

Proportion

1. If Peter can pack a box in $4\frac{1}{2}$ minutes, how long will it take him to pack 20 boxes?

2. If each box weighs 12.4 kg, how many can fit on a pallet rated for 1 tonne (1,000 kg)?

3. It takes Sally 55 minutes to stack 200 boxes onto pallets. How long would it take her to stack 450 boxes?

4. If you walk at 6 km per hour, how long does it take to walk 15 km?

5. How long does it take a pump working at 5.5 m^3 per hour to remove 12 m^3 of water?

Ratio

6. What is the ratio of white to grey shown?

7. Simplify 3.6 **:** 1.2 to the simplest possible ratio.

8. If there are 24 Catholics in a class of 30 boys, what is that in the simplest ratio?

9. If the ratio A **:** B is 3 **:** 4 and there are 60 As, how many Bs are there?

10. Split $98 in the ratio 1 **:** 4.

Conversion

1 Euro = US$1.38

11. How many Euros will you get for US$300?

12. How many US$ will you get for 240 Euros?

MAN vs MATHS 2014

Answers: Basic Ratios and Proportion Practice #3

There are usually many ways of answering these questions (*but only one correct answer*).

1. $20 \times 4\frac{1}{2}$ **90 minutes (or $1\frac{1}{2}$ hours)**

2. 1000 ÷ 12.4 = 80.645 Need to round down **80 boxes**

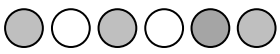
3. 200 ÷ 55 = 3.6363636 boxes per minute
   450 ÷ 3.6363636 = 123.75 **123.75 minutes (about 2.06 hours)**
   (note: do not round until the end. The 3.63636 is not 3.6 or you lose 16 whole minutes)

   Alternatively we can do it as a fraction of the original time: $\frac{450}{200}$ *× 55 = 123.75 minutes*

4. 15 ÷ 6 = **2.5 hours**

5. 12 ÷ 5.5 = 2.181818 **2.18 hours (131 minutes)**

Ratio

6.  white **:** grey = 2 : 4 = **1 : 2**

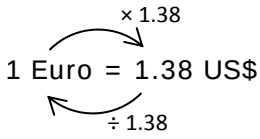
7. 3.6 **:** 1.2 (× 10) = 36 : 12 (÷ 12) = **3 : 1**

8. 24 Catholics : 6 Others = **4 : 1**

9. 3 **:** 4 = 60 : 80 (× 20 on both sides) **There are 80 Bs**

10. 1 **:** 4 means there are 1 + 4 = 5 shares. $98 ÷ 5 means each share is $19.6
    Answer = $19.60 : $78.40

Conversion



11. 300 ÷ 1.38 **217.39 Euros**

12. 240 × 1.38 **331.20 US$**

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