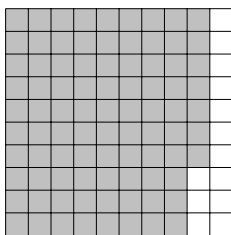F = fraction, D = decimal, P = percentage, R = ratio*

1. Part of this 100 square is shaded.

Write down the
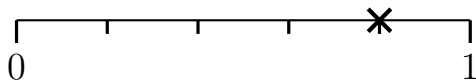
    (i) fraction shaded   . . . .

    (ii) percentage shaded   . . . . %

2. (a) Write 53% as a fraction.

   (b) Write $\dfrac{19}{100}$ as a percentage.

3. A probability is shown on this probability line with a cross.

   Write down the probability shown as a fraction.

4. (a) Write 142% as a decimal.

   (b) Write 42% as a decimal.

   (c) Write 14.2% as a decimal.

   (d) Write 2% as a decimal. {includes adding leading 0's when necessary}

   (e) Write 0.2% as a decimal.

   (f) Write 0.27% as a decimal.

   (g) Write 0.027% as a decimal.

5. (a) Write   0.08   as a percentage. {includes removing leading 0's when necessary}

   (b) Write   2.08   as a percentage.

   (c) Write   0.085   as a percentage.

   (d) Write   2.385   as a percentage.

6. (a) A bicycle hire centre has adult bikes and child size bikes.
      The ratio of the number of adult bikes to the number of child size bikes is 5 : 2
      What fraction of the bikes are child size bikes?

   (b) There are cheese, fish and ham rolls on a tray.
      The ratio of the number of cheese rolls to the number of fish rolls to the number of ham rolls is 4 : 2 : 3
      What fraction of the rolls are fish rolls?

7. The fraction of boys in a class is $\dfrac{3}{5}$

   Write down the ratio of the number of boys to the number of girls in the class.

8. (a) Write 0.9 as a percentage. {includes adding trailing 0's when necessary}

   (b) Write 1.9 as a percentage.

   (c) Write 9 as a percentage.

9. (a) Write 70% as a decimal {includes removing trailing 0's when necessary}

   (b) Write 170% as a decimal

   (c) Write 200% as a decimal

10. The Villanueva family spent 12 hours travelling on a long weekend.

    The long weekend was 72 hours long.

    Express 12 as a fraction of 72.

    Give your answer in its simplest form.

11. A gardener planted 90 aster plants.

    She also planted 36 viola plants.

    Write down the ratio of the number of aster plants to the number of viola plants.

    Give your ratio in its simplest form

12. (a) Evan is cooking soup. {ALSO some include metric unit conversion}
    He has a one kilogram of vegetables.
    450 grams of the vegetables are pumpkin.
    Write down 450 grams as a percentage of 1 kilogram.

   (b) Isla buys a multi-pack of 15 packets of crisps.
    3 of the crisp packets are cheese and onion.
    What percentage of the multi-pack is cheese and onion flavour.

   (c) Rafan is swimming 2 kilometres.
    He has swum 700 metres so far.
    Write down 700 metres as a percentage of 2 kilometres.

   (d) Mahirah had £25 to spend last week.
    She spent £3 on a magazine.
    Express £3 out of £25 as a percentage.

13.   (a)   Write $\dfrac{9}{20}$ as a percentage. {fractions can be $\dfrac{\square}{4}$ or $\dfrac{\square}{5}$ or $\dfrac{\square}{10}$ or $\dfrac{\square}{20}$ or $\dfrac{\square}{25}$}

       (b)   Write $\dfrac{21}{20}$ as a percentage.

14.   (a)   Which is larger $78\ \%$ or $\dfrac{4}{5}$?

       (b)   Asif got $\dfrac{40}{50}$ of his French vocabulary correct in January.

           He got 78% of his French vocabulary correct in February.

           Asif wants to know when he got most vocabulary correct in January or February.
           Which month was most vocabulary correct January or February?
           Explain how you know.

15.   (a)   Write $\dfrac{9}{20}$ as a decimal. {fractions can be $\dfrac{\square}{4}$ or $\dfrac{\square}{5}$ or $\dfrac{\square}{10}$ or $\dfrac{\square}{20}$ or $\dfrac{\square}{25}$}

       (b)   Write $\dfrac{21}{20}$ as a decimal.