1.   The sum of the weights of Tom and Bill is 118 kg.
        Tom weighs 14 kg more than Bill.
        How many kg does Bill weigh?

                                                                    _____(kg)   1

2.   A bucket was originally full of water. Every minute, 0.2 litres
        of water dripped out through a hole at the bottom.
        After 36 minutes, the bucket was only two-fifths full.
        How many litres of water were in the bucket when it was full?

                                                                    _____(litres)   2

3.   Six bowls are arranged in a row. Initially, there are 23 beans in
        Bowl A (on the left), 8 in B, 4 in C, 17 in D, 32 in E, and 6 in F.
        You want to move beans until there is an equal number of beans
        in each bowl. You are allowed to move a bean from any bowl to
        any other bowl. What is the minimum number of beans that have
        to be moved *in the left to right* direction?

        A   B   C   D   E   F
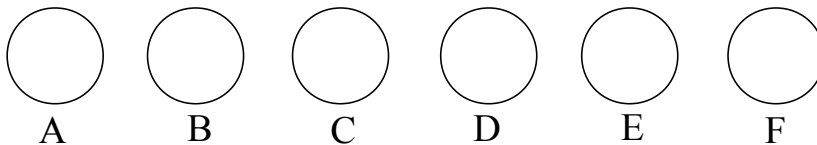
                                                                    _____   3

4.   In the picture below, the larger square has side 5,
        and the smaller square has side 3.
        What is the length of *AB* ?
        Express your answer as a common fraction.
        (Hint: Some triangles are similar.)
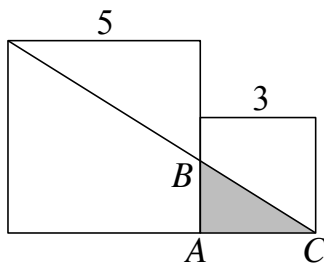
                                                                    _____   4

Grade Five (5) Division

5. Mary went shopping. She took with her three $10 bills,
    four $5 bills, a few $2 coins, and no other money.
    The number of bills in Mary's wallet exceeded the number
    of coins by 2. Mary first bought a plant and a bottle of shampoo,
    which costs half as much as the plant. She then spent half of the
    money she had left on a computer bag. After that, she had $15 left.
    How many dollars did the shampoo cost?

                                                         _____($) 5

6. How many non-congruent, non-isosceles triangles are there,
    such that all sides are integers, one side has length 7,
   and the perimeter of the triangle is 20?

                                                         _____ 6

7. There are 5 beads in a jar: 2 are white, and 3 are black.
    Jana picks 2 of the beads at random.
    What is the probability that the 2 beads are of the same colour?
    Express your answer as a common fraction.

                                                         _____ 7

8. A and B are the endpoints of a diameter of a circular pond, and
    C is a point on this diameter. It takes Andrew exactly as long to
    swim from C to A (along the diameter) as it takes for Joshua to
    run around the edge of the pool from B to A. It takes Andrew
    twice as long to swim from C to B (along the diameter) as it takes
    for Joshua to run around the edge of the pool from B to A.

    Given that Andrew swims at $\dfrac{6}{\pi}$ km/hour, at what

    speed (in km/hour) does Joshua run?
   (Hint: Find the location of C on AB.)
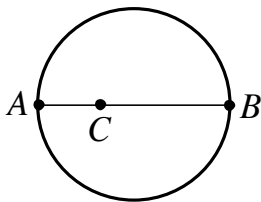
                                                         _____(km/h) 8

Grade Five (5) Division

9. ·Augustus writes a 5-letter word using the characters A, B, C, D,
and E in a certain order from left to right.
The letter A is to the left of C but to the right of D.
The letter B is to the right of D but to the left of A.
The letter E is to the right of B but to the left of C.
If E is not the third letter of the word, which letter is third?

_____ 9

10. The areas of the two smaller (unshaded) squares
inside square *ABCD* are 4 and 9.
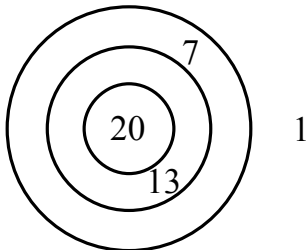What is the sum of the areas of the shaded rectangles?

A D

B C
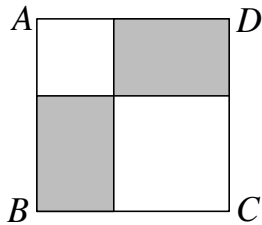
_____ 10

11. How many positive whole numbers smaller than 2010 leave no
remainder when divided by any positive whole number smaller than 8?

_____ 11

12. A circular dart board (the outer circle) has two additional circles drawn
on it as shown. If a dart lands in a region, you get the number of points
shown. Note that you get 1 point if the dart lands outside the dart board.
In a game, Bully's score was 200, Avergy's score was 50, and Missy's
score was 19. They each threw the *same* number of darts.
What is the smallest possible value of that number
of darts that each of them threw?
(Hint: Most possibilities can be easily ruled out.)

7

20

13

1

_____ 12