# S1 April Test Revision (Level 3)

1. John is driving from Edinburgh to Aberdeen, a distance of 190 km. His average speed during the journey is 40 km/h. Calculate the time he takes to complete the journey in hours and mins.

2. Mary decides to go for a walk. She takes 1 h 15 mins to walk 5 miles. Calculate her speed in mph.

3. Calculate   a) 4 + (-3)   b) –3 – 7   c) 5 – (-6)   d) -3 + (-4)
                     e) 5 x (-2)   f) (–3) x (-5)   g) –12 ÷ 4   h) -4 ÷ 8

4. If a = 3, b = -2 and c = -4 Calculate
   a) a + b   b) b – c   c) ab   d) 2a – 3c   e) a^2
   f) ab ÷ c   g) a(b + c)   h) b – c^2 i) $(b + a)^2$

5. Multiply out the brackets
   a) 3(x + 5)   b) 4(2y – 3)   c) 2(3f – 4) + 4f   d) 19 - 2(6 – 3m)

6. Solve the following equations
   a) 4(y – 1) = 36   b) 3(x + 2) + 1 = 7   c) 5x – 3 = 4x + 10   d) 7x + 5 = 5x + 9

7. Calculate (do not measure) each of the angles labelled a, b, c, etc
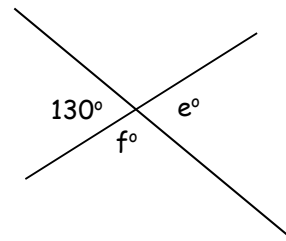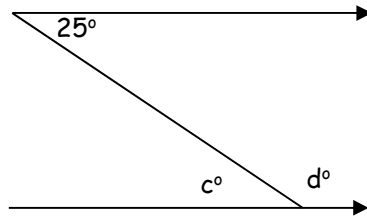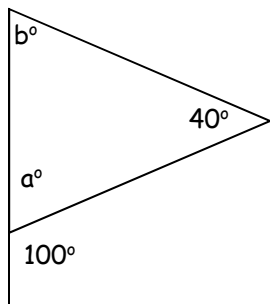
8. Write as decimals a) ¼ = _____   b) $^1/_2$ = _____   c) $^3/_5$ = _____

9. Calculate   a) ¼ of £20   b) $^7/_{10}$ of £5   c) $^2/_3$ of £24   d) $^5/_8$ of £67

10. Do the following questions without a calculator. Show all working
       a) 10% of £50   b) 25% of £64   c) 35% of £50   d) 86% of 3500

11. a) A shop normally sells a coat for £50. During a sale they offer a 40% discount.
         Calculate the sale price of the coat.
     b) An antique vase cost £200. Its value increases by 30% in a year.
         Calculate the new value of the vase.

12. There are 65 cars in a car park. $^3/_5$ of the cars are silver.   How many silver cars are there?

13. a) The ratio of boys to girls in a kindergarten is 2:3. If the number of boys is 12, find
          the number of girls.
      b) In a play school, there are 36 balls of colours red and white. The ratio of red balls
          to white balls is 4:5. Find the number of white balls.
      c) The distance travelled by Ben and Tim is in the ratio 3:4. The distance
          travelled by Tim is 24 miles. Find the distance travelled by Ben.

Answers

1   T = 190 ÷ 40 = 4.75 hours = 4 hours 45 mins

2   S = 5 ÷ 1.25 = 4 mph

3   a) 1   b) –10   c) 11   d) –7   e) –10   f) 15   g) –3   h) –0.5

4   a) 3 + (-2)   b) –2 – (-4)   c) 3 x (-2)   d) 2 x 3 – 3 x (-4)   e) 3 x 3
        = 1   = 2   = -6   = 18   = 9

    f) (3 x (-2)) ÷ (-4)   g) 3 x ((-2) x (-4))   h) (-2) – (-4) x (-4)   i) (-2 + (-4))^2
        $= \frac{-6}{-4} = \frac{6}{4} = \frac{3}{2}$ = 3 x 8 = 24   = -2 – (16) = -18   = (-6) x (-6) = 36

5   a) 3x + 15   b) 8y – 12   c) 10f – 8   d) 7 + 3m

6   a) 4y – 4 = 36   b) 3x + 6 + 1 = 7   c) 5x – 3 = 4x + 10   d) 7x + 5 = 5x + 9
        4y = 40   3x = 0   x – 3 = 10   2x + 5 = 9
        y = 10   x = 0   x = 13   2x = 4
                                        x = 2

7   a = 80º   b = 60º   c = 25º   d = 155º   e = 130º   f = 50º

8   a) 0.25   b) 0.5   c) 0.6

9   a) 18 girls   b) 20 white balls   c) 18 miles

10   a) £5   b) £16   c) £17.50   d) £3010

11   a) discount = £20   New Price = 50 – 20 = £30
    b) increase = £60   New Value = 200 + 60 = £260

12   39 silver cars

13   a) 2 parts = 12 boys so 1 part = 6 people   3parts = 18 girls
    b) 9 parts in total   9 parts = 36 balls so 1 part = 4 balls   5 parts = 20 white balls
    c) 4 parts = 24 miles so 1 part = 6 miles   3 parts = 18 miles