Weekly check: Foundation crossover

Grades 4 and 5 | Foundation | 20 questions, 50 marks

GCSE Maths weekly check

Scan for the solutions

Name: _____ **Date:** _____ **Score:** _____ **/ 50**

1 A pair of trainers costs £60.

In a sale the price is decreased by 20%.

Work out the sale price. You may use the multiplier 0.8

(2 marks)

Answer _____

2 For each pair of triangles, write down the condition (SSS, SAS, ASA, RHS) that shows they are congruent, or write "not enough information".

a. Both triangles have sides of 6 cm and 8 cm with an angle of 50° between them.

b. Both triangles have a side of 7 cm with an angle of 40° at one end and an angle of 60° at the other end.

c. Both triangles have a right angle, a hypotenuse of 13 cm and one other side of 5 cm.

d. Both triangles have angles of 50°, 60° and 70°.

(4 marks)

Answer _____

3 Here are the first four terms of an arithmetic sequence.

3 10 17 24

Find an expression, in terms of n, for the nth term of the sequence.

(2 marks)

Answer _____

4 Zak plays two games of darts. He draws a probability tree diagram.

On the first pair of branches he writes P(win) = 0.6 and P(lose) = 0.5.

He then works out P(win both games) = 0.6 + 0.6 = 1.2.

Write down **two** mistakes Zak has made.

The games are independent, with the same probability of winning each game. There are no draws.

(2 marks)

Answer _____

5 Two straight lines are parallel. A third line crosses them. Two angles lie between the parallel lines, on the same side of the crossing line, in a C shape. One of these angles is 108°.

Work out the size of the other angle. Give the name of this type of angle.

(2 marks)

Answer _____

6 A hockey team played 25 matches. The table shows the number of goals the team scored in each match.

Goals scored	Frequency
0	4
1	7
2	9
3	3
4	2

a. Write down the modal number of goals scored.

b. Work out the total number of goals the team scored in the 25 matches.

(3 marks)

Answer _____

7 a. Write down the value of 5^0

b. Write down the value of 2^{-3} as a fraction

(2 marks)

Answer _____

8 A taxi company charges a fixed fee plus a cost for each kilometre travelled. The table shows the cost, in pounds, for some journeys. The points lie on a straight line graph.

Distance (km)	0	2	4	6
Cost (£)	3	7	11	15

a. Work out the gradient of the line.

b. What does the gradient represent?

c. What does the y-intercept represent?

(3 marks)

Answer _____

9 A = {factors of 12} B = {factors of 18}

a. List the members of A ∩ B.

b. Is 9 a member of A ∪ B? Give a reason for your answer.

(3 marks)

Answer _____

10 a. Complete the table of values for $y = x^3 - 2x^2$

x	-1	0	1	2	3
y		0			9

b. Use the table to write down two values of x for which $y = 0$

(4 marks)

Answer _____

11 Leon walks to his friend's house. He leaves home at 10:00. The distance-time graph is a straight line which reaches 3 km at 10:45. He keeps walking at the same speed.

a. Work out his speed in km/h.

b. His friend lives 7 km from Leon's home. At what time does Leon arrive?

(3 marks)

Answer _____

12 a. Write 0.0698 in standard form.

b. Which is greater, 7.3×10^{-2} or 0.0698?
You must show your working.

(3 marks)

Answer _____

13 Write 84 as a product of its prime factors.

(2 marks)

Answer _____

14 Solve $\frac{x+4}{3} = \frac{2x-1}{5}$

(3 marks)

Answer _____

15 Solve $4x + 3 = x + 18$

(2 marks)

Answer _____

16 Solve $4x + 3 < 19$

(2 marks)

Answer _____

17 A locker code is made up of one letter followed by two digits.
The letter is chosen from the 26 letters A to Z.
Each digit is chosen from 0 to 9, and digits may repeat.
Work out the number of different codes that are possible.

(2 marks)

Answer _____

18 Hannah puts £2400 into a savings account.
The account pays 3% simple interest each year.
Work out the total amount of interest Hannah gets after 3 years.

(2 marks)

Answer _____

19 Each exterior angle of a regular polygon is 30°.
Work out the number of sides of the polygon.

(2 marks)

Answer _____

20 The mass of a parcel is 340 g, correct to the nearest 10 g.
Complete the error interval for the mass, m grams, of the parcel.
..... $\leq m <$ .....

(2 marks)

Answer _____

End of questions | Total 50 marks