

Indices and surds – 2022 GCSE Mathematics Foundation

1. **June/2022/Paper_J560/01/No.18**

(a) Write 6 050 000 in standard form.

(a) [1]

(b) Write 4.58×10^{-3} as an ordinary number.

(b) [1]

2. June/2022/Paper_J560/02/No.12

Dinosaurs first appeared on Earth 2.4×10^8 years ago.

Dinosaurs became extinct on Earth 7×10^7 years ago.

(a) Explain why it is appropriate to use standard form for these numbers.

.....
.....
..... [1]

(b) Use the given information to work out how long dinosaurs existed on Earth.
Give your answer in standard form.

(b) [3]

3. June/2022/Paper_J560/02/No.13

(a) Complete this statement by writing the missing power in the box.

$$784 = 2^{\square} \times 7^2$$

[1]

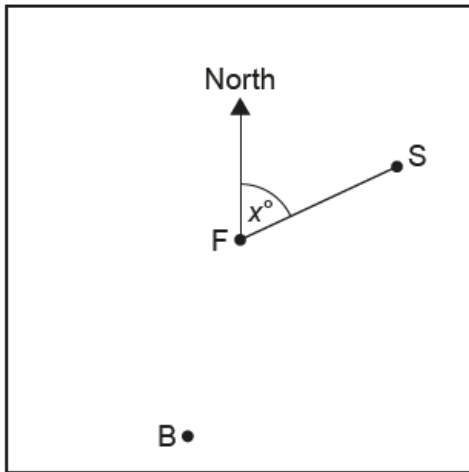
(b) Use your answer to part (a) to find the value of $\sqrt{784}$.

(b) [2]

4. June/2022/Paper_J560/02/No.16

A town square has a fountain (F) at the centre.
There is also a bell tower (B) and a statue (S).

The bearing of the statue from the fountain is x° .



Not to scale

- (a) The bearing of the bell tower from the fountain is 140° more than the bearing of the statue from the fountain.

Write down, in terms of x , the bearing of the bell tower from the fountain.

(a) $^\circ$ [1]

- (b) The bearing of the bell tower from the fountain is also three times the bearing of the statue from the fountain.

Work out the bearing of the bell tower from the fountain.

(b) $^\circ$ [4]

5. June/2022/Paper_J560/03/No.16

For each statement, complete the box to show the power of 10.

(a) One million = 10^{\square} [1]

(b) One thousandth = 10^{\square} [1]