MAP WORK 1

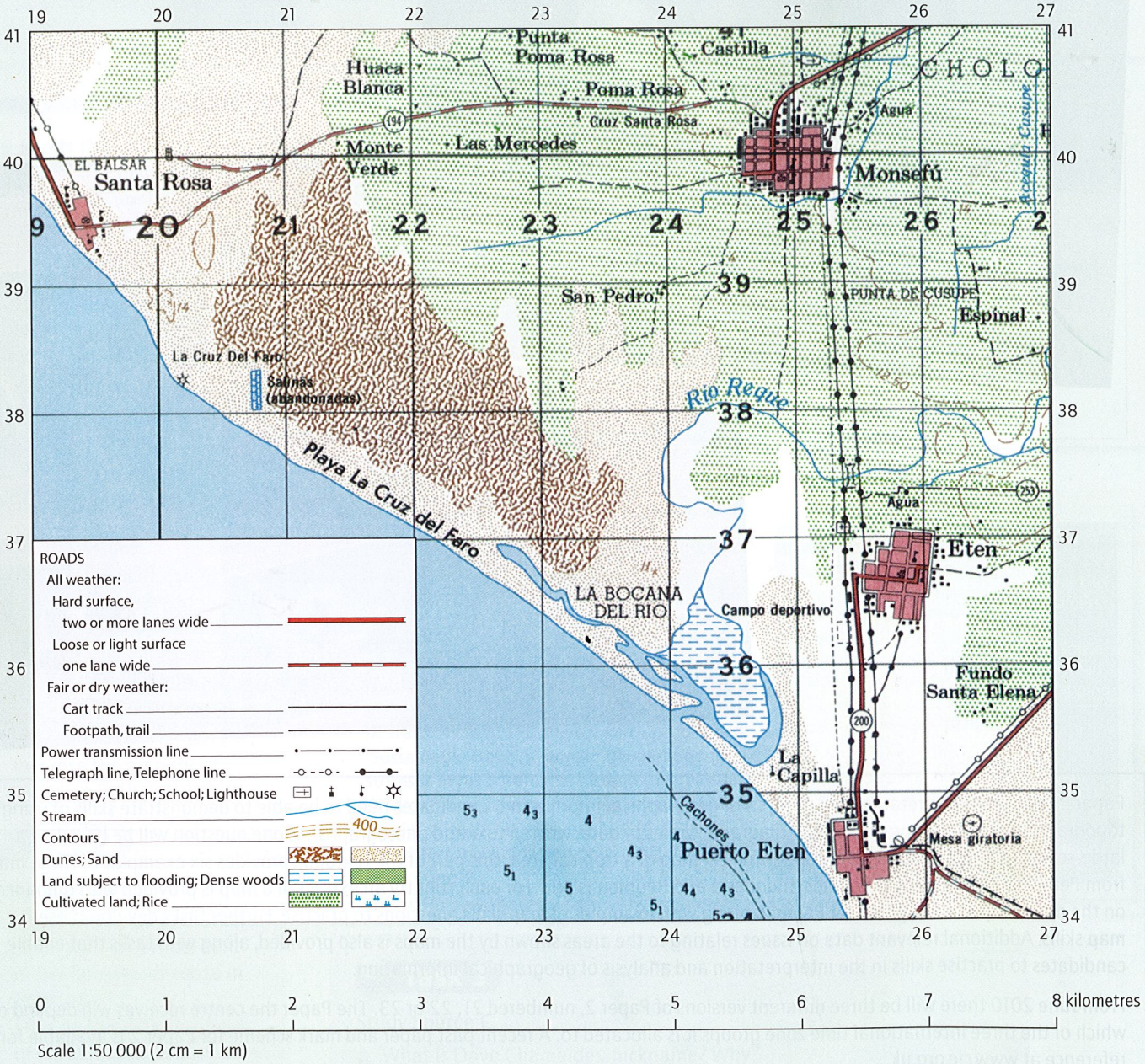
Monsefu, Peru

Peru – a country of varied relief

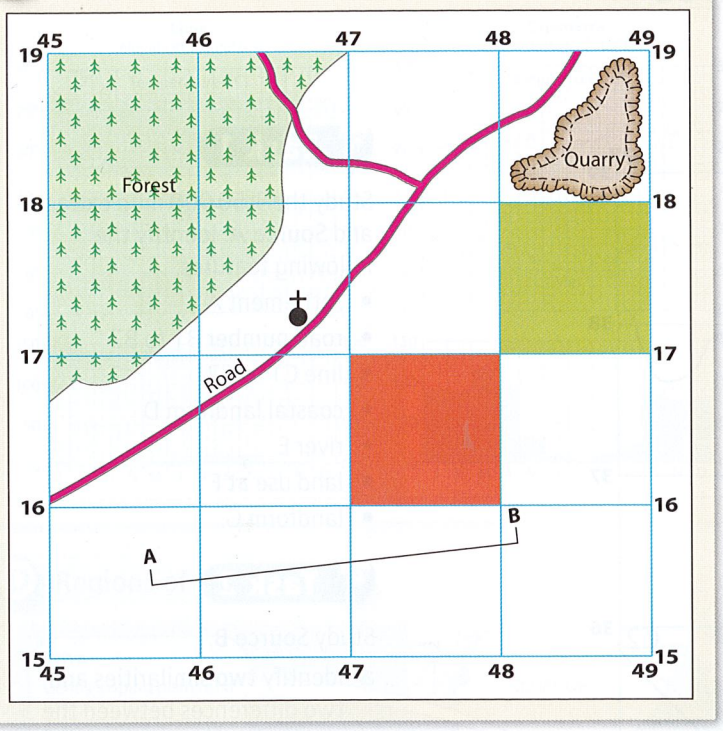
Peru, in western South America, covers almost 1.3 million km². The country borders Ecuador and Colombia to the north, Brazil to the east, Bolivia to the south-east and Chile to the south. The Andes mountains run parallel to the Pacific Ocean, dividing the country into three regions:

- The Costa (coast), in the west, is a narrow plain.
- The Sierra (highlands) is in the Andes mountains. It includes the Altiplano plateau as well as the highest peak of the country – Huascarán at 6768 m.
- The selva is a wide expanse of flat terrain covered by the Amazon rainforest in the east.

The 1:50 000 map extract below shows the area around Monsefu and Puerto Eten, in the northern part of the Costa region.



A



SKILLS Giving 4-figure and 6-figure references

1:25 000 and 1:50 000 maps have a grid of numbered squares on them. To see how a 4-figure grid reference is given, look at the grid in **Source A** and follow these instructions to give the reference for the red shaded square.

- 47 is the line left of the square.
- 16 is the line below the square.

Put these two numbers together and you have a 4-figure grid reference: 4716.

The 4-figure grid reference of the green shaded square is 4817 because the line on the left is line 48 and the line at the bottom is 17.

6-figure grid references are used to identify a location within a square. To see how a 6-figure reference is given, follow this example using **Source A**.

- For the church symbol 467 is the easting. 46 is the grid line to the left and 7 is the number of tenths along towards the next grid line.
- 173 is the northing. 17 is the grid line below and 3 is the number of tenths up towards the next grid line.
- The 6-figure reference is 467173.
- The 6-figure reference of the road junction is 475182. This point is halfway (five-tenths) between eastings 47 and 48 and two-tenths of the way between northings 18 and 19.

Task 1

Study the 1:50 000 map extract of Monsefu.

a Name the small settlements in the following squares: 2338 2635 2638

b What is at the following 6-figure references? 248352 195396 202383

SKILLS Working out distance and area

The scale of the Monsefu map is 1:50 000. This means that every centimetre on the map represents 50 000 centimetres (0.5 kilometres) in reality. Therefore the map has a scale of 2 cm = 1 km. This scale is shown by the line below the map.

To work out a **distance**, place a piece of paper with a straight edge between the two points you are measuring. Mark off these points, then transfer the piece of paper to the line below the map. Make sure that the first point marked on the paper is level with zero, then read off the distance between the two points. If you do this on the grid in **Source A** to measure line A–B you should get 2.5 km as your answer.

Each grid square on the map measures 2 cm x 2 cm and therefore it represents 1 square kilometre of land. To work out an **area**, count the total number of grid squares, or estimate areas that are smaller than a grid square, giving your answer in square kilometres. In **Source A**, the forest occupies a total of three grid squares so it is 3 km^2. The quarry takes up about half a grid square so this is an area of 0.5 km^2.

Task 2

Study the 1:50 000 map extract.

a What is the distance :
- along the telephone line from Puerto Eten to where it crosses the road north-east of Monsefu
- along the road from Monsefu to Santa Rosa?

b Estimate the area:
- of sand dunes between Santa Rosa and La Bocana del Rio
- of land subject to flooding at La Bocana del Rio.

Task 3

Study the 1:50 000 map extract. Find the following settlements:

- Eten (in and around grid square 2536)
- Monsefu (in and around grid square 2539)
- Puerto Eten (in grid square 2534)
- Santa Rosa (in grid square 1939).

The built-up area in each settlement is shown in pink.

Estimate the area of land covered by each settlement and then write the names of the four settlements in a list, from the largest one to the smallest.