



Marine Litter Learners - Maths Worksheet (P6-7) Total Mark: _____ / 50

Write your answers below each question or on a separate sheet. A calculator may be used.

- 1) 40 school pupils are doing a 50 metre survey at East Haven beach after a big storm surge. They collect the following beach litter data in 2 hours.

Plastic:

- 31 bottles
- 35 bottle tops
- 12 straws
- 203 rope strands/fishing line
- 19 takeaway cups

Sanitary waste:

- 267 cotton bud sticks
- 133 wet wipes

Rubber:

- 2 tyres
- 16 balloons

Metal:

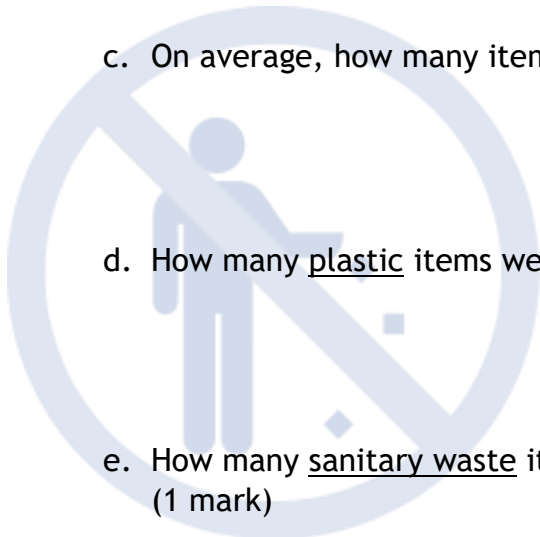
- 18 drinks cans
- 12 creel/lobster pots

Glass:

- 2 bottles

Total Weight: 0.38 Tonnes

- a. How many items of litter were found in total? (1 mark)
- b. On average, how many items in total were found per hour? (1 mark)
- c. On average, how many items in total were collected per pupil? (1 mark)
- d. How many plastic items were found per metre? (1 mark)
- e. How many sanitary waste items were found per metre?
(1 mark)



f. How many items in total were found per metre? (2 mark)

g. How much was the total weight in kilogrammes? (1 mark)

h. How many kilogrammes were collected per metre? (2 mark)



2) 28 volunteers are doing a 20 metre survey at Cairnbulg beach. They collect the following beach litter data in 4 hours.

Plastic:

- 7 buoy/floats
- 145 rope strands/fishing line
- 8 tangled nets
- 24 bottles
- 2 hard hats
- 84 polystyrene pieces

Rubber:

- 2 tyres
- 178 blue gloves
- 10 balloons

Metal:

- 14 drinks cans
- 6 creel/lobster pots

Sanitary waste:

- 61 cotton bud sticks
- 9 wet wipes

Other:

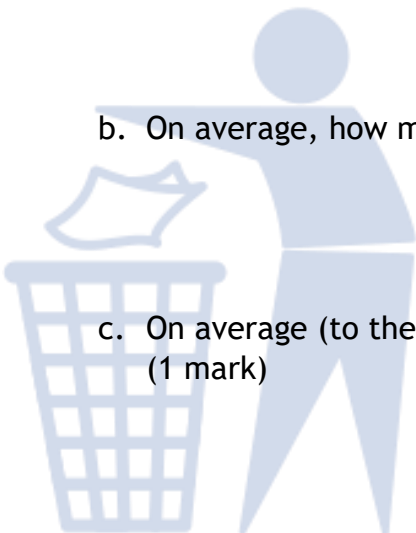
- 30 oil filters

Total Weight: 0.98 Tonnes

a. How many items of litter were found in total? (1 mark)

b. On average, how many items in total were found per hour? (1 mark)

c. On average (to the nearest 10), how many items in total were collected per volunteer? (1 mark)



d. How many plastic items were found per metre? (1 mark)

e. How many rubber items were found per metre? (1 mark)

f. How many items in total were found per metre? (2 marks)

g. How much was the total weight in kilogrammes? (1 mark)

h. How many kilogrammes were collected per metre? (2 marks)



3) 15 volunteers are doing a 100 metre survey at Stonehaven beach after spells of heavy rain and flooding. They collect the following beach litter data in 3 hours.

Plastic:

- 35 bottles
- 76 bottle tops
- 23 straws
- 398 rope strands/fishing line
- 28 takeaway cups

Rubber:

- 1 tyre
- 14 balloons

Metal:

- 16 drinks cans
- 1 creel/lobster pot

Sanitary waste:

- 301 cotton bud sticks
- 99 wet wipes

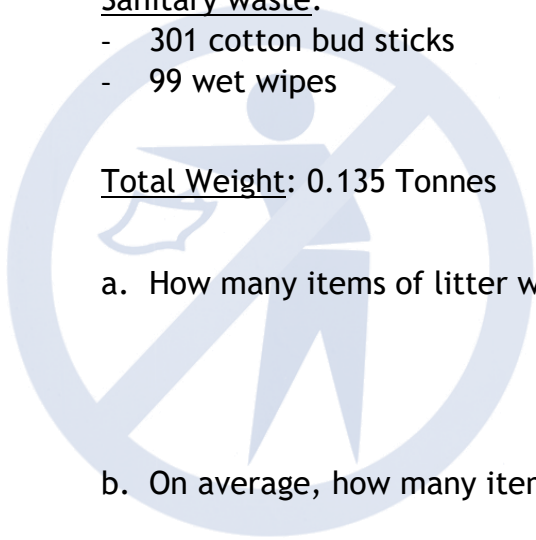
Glass:

- 8 bottles

Total Weight: 0.135 Tonnes

a. How many items of litter were found in total? (1 mark)

b. On average, how many items were found per hour? (1 mark)



c. On average (to the nearest 10), how many items we collected per volunteer? (1 mark)

d. How many plastic items were found per metre? (1 mark)

e. How many sanitary waste items were found per metre? (1 mark)

f. How many items in total were found per metre? (2 mark)

g. How much was the total weight in kilogrammes? (1 mark)

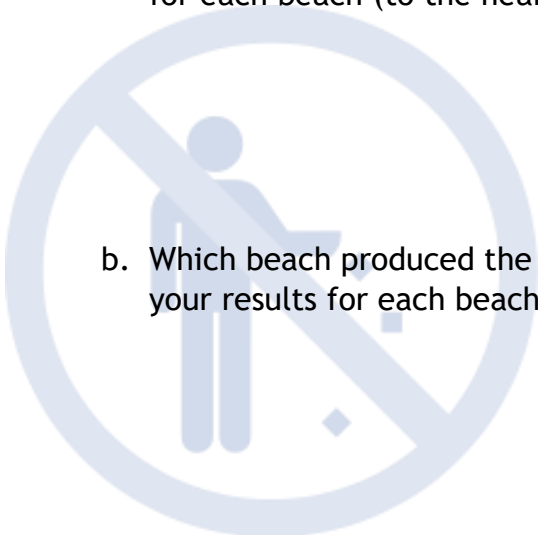
h. How many kilogrammes were collected per metre? (2 mark)



4) Using the information and beach litter survey results in Questions 1, 2 and 3, answer the following questions.

a. Which beach produced the lowest overall weight per person? Please show your results for each beach (to the nearest 1 decimal point). (3 marks)

b. Which beach produced the least number cotton bud sticks per metre? Please show your results for each beach (to the nearest 1 decimal point). (3 marks)



- c. Which beach produced the most wet wipes per metre? Please state the correct beach show your results for each beach (to the nearest 1 decimal point). (3 marks)
- d. Which beach produced the most plastic bottles per metre? Please state the correct beach show your results for each beach (to the nearest 1 decimal point). (3 marks)
- e. Which beach produced the most rope strands/fishing line per metre? Please state the correct beach show your results for each beach (to the nearest 1 decimal point). (3 marks)



- 5) **8 million tonnes** of litter enter the sea every year. If an average bin lorry can hold up to around **14 tonnes** of litter, finish the following factual statement using one of the options below. Please show your working. (5 marks)

(Clearly underline the correct answer)

8 million tonnes of plastic pollution entering the sea is equivalent to dumping the contents of a full bin lorry into the sea every...

- a. Minute
- b. Hour
- c. Day
- d. Week



Total Mark: _____ / 50