National 4 Non-Calculator Quick Test

1. Round 27.89547 to 2 decimal places.

   A 27.895   B 27.89

   C 27.90   D 30

   _1_

2. Find 3 /7 of £217

   _2_

3. Calculate - 7 - (- 8)

   A 15   B 1

   C -15   D -1

   _1_

4. Calculate 150 ÷ (-3)

   _1_

5. Given a = 9 and   b = (-7)
   Evaluate $3a^2 - b$

   _3_

6. Fred bought a car for £1200 and sold it one year later for £900.
   Express his loss as a percentage of the original purchase price.

   _3_

7. Expand the brackets
   4(3x + 4t + 5)

   _2_

8. An aircraft takes off at 21:45 hrs and lands at 02: 33 hrs
   How long was the duration of the flight ?

   _2_

9. A n item is on sale for £3600.
    HP is available in store for a deposit of £600 and 12 monthly payments of £280.
   How much cheaper is the item if it is paid for by cash ?

   _3_

10. Change the subject of the formula
    v = u + at   to   a

   _2_

National 4 Calculator Quick Test

1. A central heating engineer charges twenty six pounds per half hour plus a call out fee of forty pounds to attend faulty systems.

   How much does he charge to attend a system which takes 2 ½ hours to repair ?

   ___
   3

2. Janice is asked to randomly pick two cards from a standard pack of 52 playing cards and place them on a table.

   ___
   3

   A. What is the probability of her picking a black queen as her first card ?
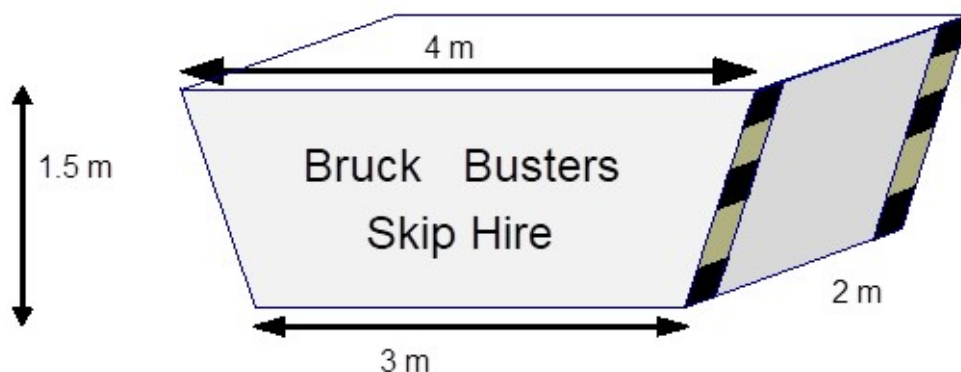   Fully simplify your answer

   ___
   2

   B. She picks the six of hearts.

   What is the probability of her now picking a black queen as her second card ?

   ___
   1

3. Climbing rope is sold by the metre. 5m of rope costs £18.40.
   What is the cost of 17m of rope?

   ___
   3

4. Bruck Busters operate a small refuse skip hire service.
The company owns 132 symmetrical skips with the dimensions as shown in the picture below.

A. Calculate the total volume of the entire fleet of skips.

4

B. To conform with new Health & Safety Regulations, each skip must have reflective tape placed vertically on all slanting edges, as shown above.

4

Tony has been given the task of replacing the reflective tape on every skip.
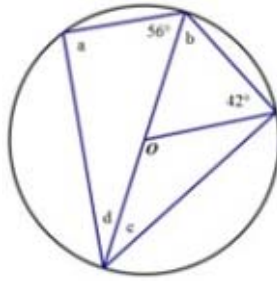Calculate the length of tape required to cover one edge of a skip.
Give your answer correct to two decimal places.

C. He uses 5m rolls of tape.
How many rolls of tape are needed to completely replace the tape on one skip ?

2

5. Find the missing angles (a,b,c,d)in the picture below:
O is the centre of the circle.

6. The following speeds , in miles per hour, were recorded by a police safety camera unit operating on the A96 :-
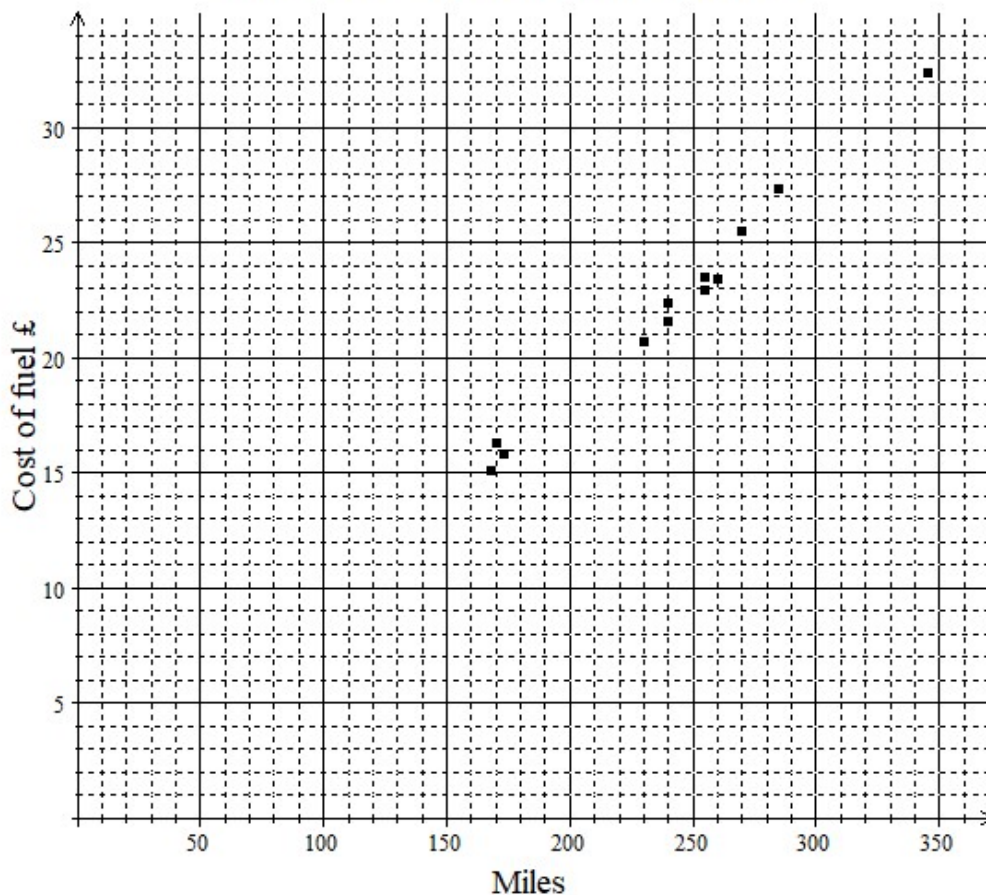
60   66   67   70   58   70   82   47   61   55   64   57   84   71   59

Calculate the Mean, Median, Mode and Range

7. Draw a line of best fit through the points on the graph and use it to estimate the cost of travelling 200 miles
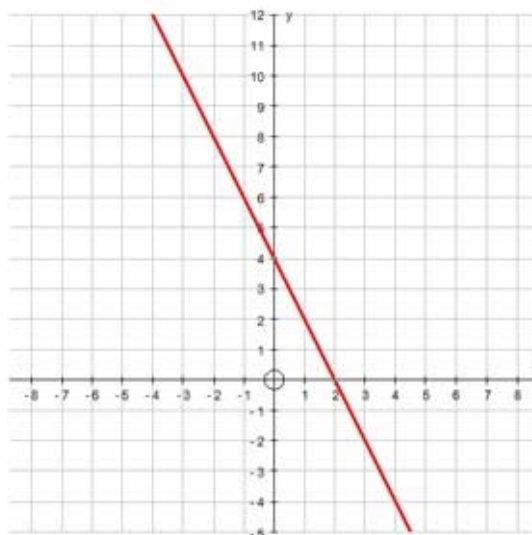
Graph of cost of fuel per miles traveled

Cost of fuel £

Miles

8. Complete the table for the equation y = -2x +4

x	-3	-2	-1	0	1	2	3
y							

9. Calculate the gradient of the line in the graph below :

10. Anna is flying her kite.
The string is 28 m long and is at an angle of 56° to the horizontal.
The kite is held at head height.

How high is the kite above her head ?
Give your answer correct to one decimal place.

28m

56°