

- 1 Berenika wants to buy 35 T-shirts.

Each T-shirt costs £5.80

Berenika does the calculation $40 \times 6 = 240$ to estimate the cost of 35 T-shirts.

- (a) Explain how Berenika's calculation shows the actual cost will be less than £240

.....
.....
(1)

There is a special offer.

T-shirts £5.80 each. Buy 30 or more T-shirts. Get 10% off the total cost.

- (b) Work out the actual cost of buying 35 T-shirts using the special offer.

£.....
(4)

- 2 Ami and Josh use a calculator to work out $\frac{595}{4.08^2 + 5.3}$

Ami's answer is 27.1115

Josh's answer is 271.115

One of these answers is correct.

Use approximations to find out which answer is correct.

3 A cycle race across America is 3069.25 miles in length.

Juan knows his average speed for his previous races is 15.12 miles per hour.
For the next race across America he will cycle for 8 hours per day.

(a) Estimate how many days Juan will take to complete the race.

.....
(3)

Juan trains for the race.
The average speed he can cycle at increases.
It is now 16.27 miles per hour.

(b) How does this affect your answer to part (a)?

.....
.....
(1)

- 4 A plane travels at a speed of 213 miles per hour.
- (a) Work out an estimate for the number of seconds the plane takes to travel 1 mile.

..... seconds
(3)

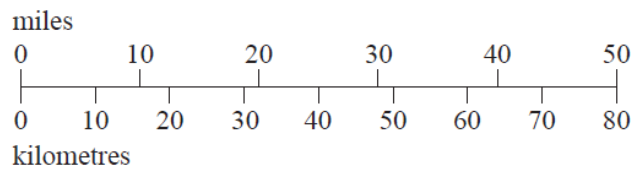
- (b) Is your answer to part (a) an underestimate or an overestimate?
Give a reason for your answer.

.....
.....
(1)

- 5 Work out an estimate for $\frac{790 \times 289}{49}$

.....
(3)

6 This scale can be used to change between kilometres and miles.



(a) Use the scale to change 40 kilometres to miles.

..... miles
(1)

Here is an approximate rule to change from kilometres to miles.

Divide the distance in kilometres by 10 and then multiply by 6

(b) Use this approximate rule to change 40 kilometres to miles.

..... miles
(2)

(c) Compare your answer to part (b) with your answer to part (a).

.....

 (1)