Name: _____

ASM Tuition Academy

ESTIMATING

Instructions:

- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided
  - there may be more space than you need.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all you're working out.**

Information:

- The marks for each question are shown in brackets
  - use this as a guide as to how much time to spend on each question.

Advice:

- Read each question carefully before you start to answer it.
- Keep an eye on time.
- Try to answer every question.
- Check your answers if you have time at the end.

Q1. Work out an estimate for the value of

$$\frac{72.4\times38.6}{9.7}$$

(Total for question 1 is 3 marks)

Q2. Work out an estimate for the value of

$$\frac{56.7\times32.4}{0.62}$$

(Total for question 2 is 3 marks)

Q3. Work out an estimate for the value of

$$\frac{48.7\times33.6}{7.4}$$

(Total for question 3 is 3 marks)

Q4. Work out an estimate for the value of

$$\frac{36.8+12.7}{0.48}$$

(Total for question 4 is 3 marks)

Q5. Work out an estimate for the value of

$$\frac{91.25\times4.87}{2.31}$$

(Total for question 5 is 3 marks)

Q6. Work out an estimate for the value of

$$\frac{18.3+62.8}{0.13}$$

(Total for question 6 is 3 marks)

Q7. Work out an estimate for the value of

$$\frac{17.6+\sqrt{45.2}}{0.38}$$

(Total for question 7 is 3 marks)

Q8. Work out an estimate for the value of

$$\frac{27.4\times13.8}{1.45}$$

(Total for question 8 is 3 marks)

Q9. Ahmad and Raza are using a calculator to evaluate the expression:

$$\frac{512.6}{18.7+5.3^2}$$

Ahmad gets an answer of 2.3, while Raza gets 13.

Use approximations to determine which of their answers is more likely to be correct.

(Total for question 9 is 3 marks)

Q10. Liam drives an average of 52.4 miles per week.

(a) Work out an estimate for the number of miles Liam drives in a year.
(b) Is your answer to part (a) an underestimate or an overestimate? Give a reason for your answer.

(Total for question 10 is 3 marks)

Q11. Ayesha gets paid £9.75 per hour she works.
Each week, Ayesha works 38 hours.

(a) Work out an estimate for the amount Ayesha gets paid in a week.
(b) Is your answer to part (a) an underestimate or an overestimate? Give a reason for your answer.

(Total for question 11 is 3 marks)

Q12. Mrs. Thompson wants to buy a calculator for every student in year 10.
There are 86 students in year 10.
Each calculator costs £7.25.

(a) Work out an estimate for the total amount of money Mrs. Thompson will spend on calculators.
(b) Is your answer to part (a) an underestimate or an overestimate? Give a reason for your answer.

(Total for question 12 is 3 marks)

Q13.Liam pays 3.5 pence per minute to use his phone.
On average, Liam uses his phone for 64 minutes per day.
He pays his phone bill for 28 days.

(a) Work out an estimate for how much Liam pays.
(b) Is your answer to part (a) an underestimate or an overestimate? Give a reason for your answer.

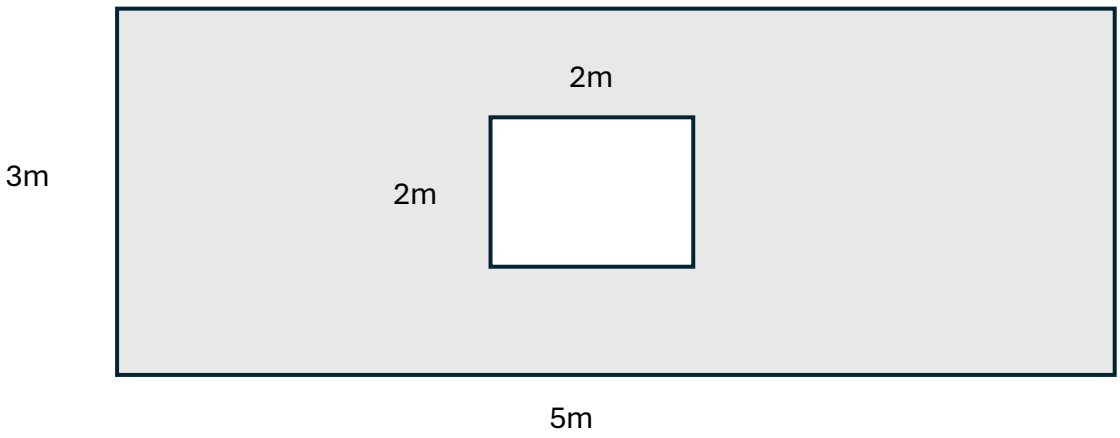
(Total for question 13 is 3 marks)

Q14. A circle has a radius of 16 meters.

(a) Work out an estimate for the area of the circle.
(b) Is your answer to part (a) an underestimate or an overestimate? Give a reason for your answer.

(Total for question 14 is 4 marks)

Q15.



(a) Work out an estimate for the area of the shape.

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

(Total for question 15 is 4 marks)

Q16. A baby was born every 35 seconds in Canada in 2022.

Work out an estimate for the total number of babies born in Canada in 2022.
You must show how you get your answer.

(Total for question 16 is 4 marks)