

IPC2 (Mathematics)

Full marks will not be awarded for a correct answer with no working. Answers must be supported by working and/or explanation.

1 Answer the following questions.

(1) Order the numbers from least to greatest:

0, -0.1, 0.01, -1

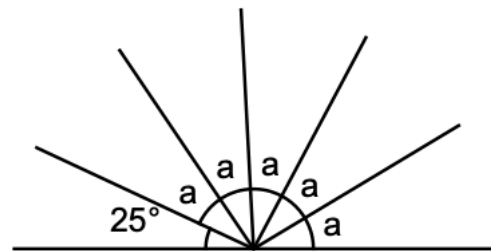
(2) Solve for x

$$\frac{3(x-4)}{2} - \frac{2 \times (3x-2)}{5} = \frac{1}{2}$$

(3) Solve for a

$$(a+4) : (3a-1) = 3.6 : 3$$

(4) Find a on the right.



(5) When a car runs 60 kilometers per hour, how many meters does it travel in 12 seconds?

2 Calculate each of the following. For these a minimum of three lines of working should be shown with your final answer.

$$(1) \left\{ \frac{1}{2} \div \frac{1}{3} - \left(-\frac{3}{2} \right)^3 \right\} \times \left(1 - \frac{4}{5} \right)$$

$$(2) \frac{11}{12}x - \frac{3 \times (2x-5)}{4} + \frac{5(x-3)}{6}$$

3 The set of data below shows the handball-throw records of 10 girls in a class. Answer the following questions.

17, 13, 19, 10, 12, 17, 24, 15, 20, 18

(1) Find the range of the distribution.

(2) What is the percentage of girls who threw a ball at least 18m?

4 The first three figures below are made up of 4, 10, and 18 "sticks" respectively.

(1) Find the number of "sticks" in the 5th figure.

(2) Find the number of "sticks" in the 10th figure.

