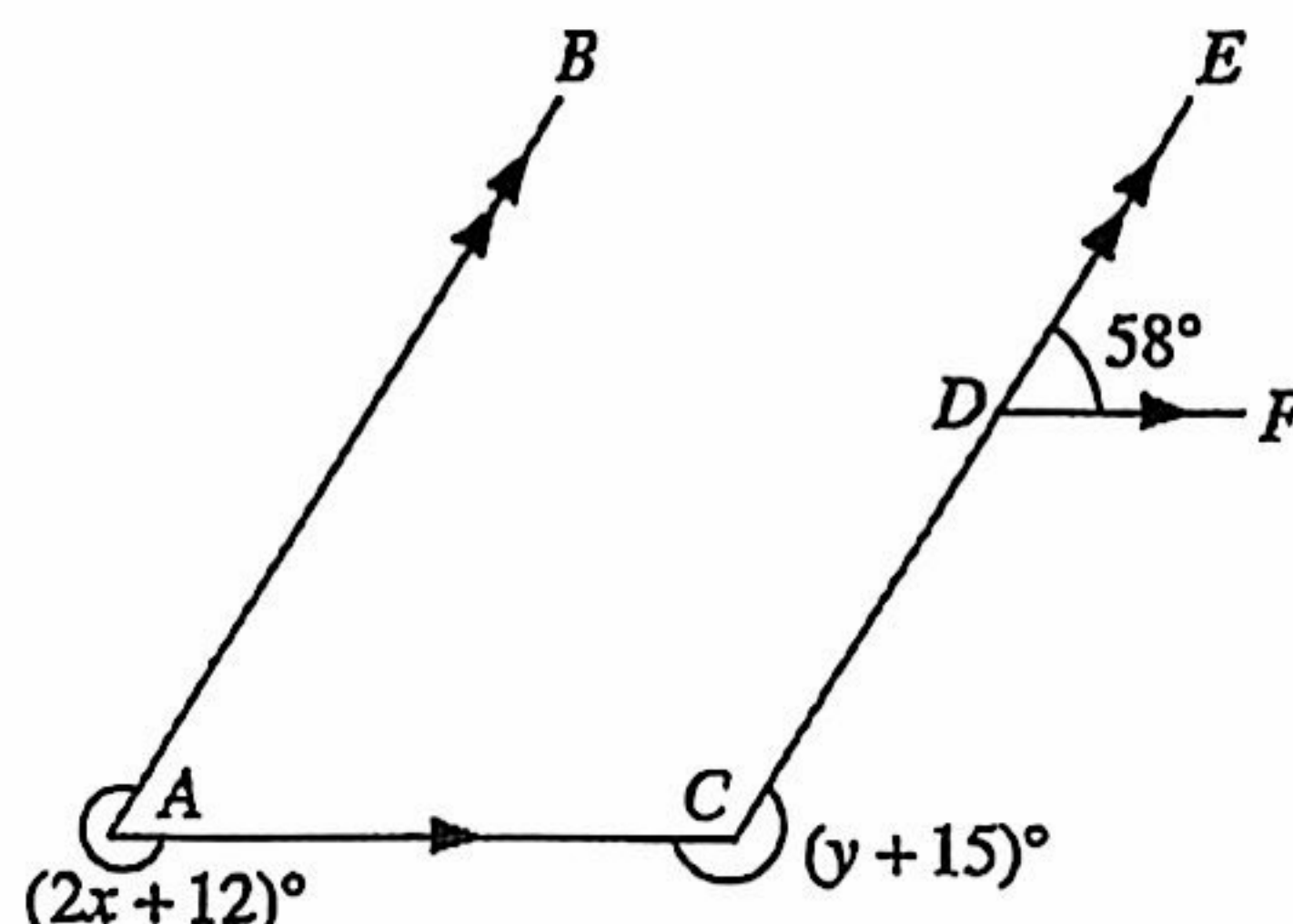




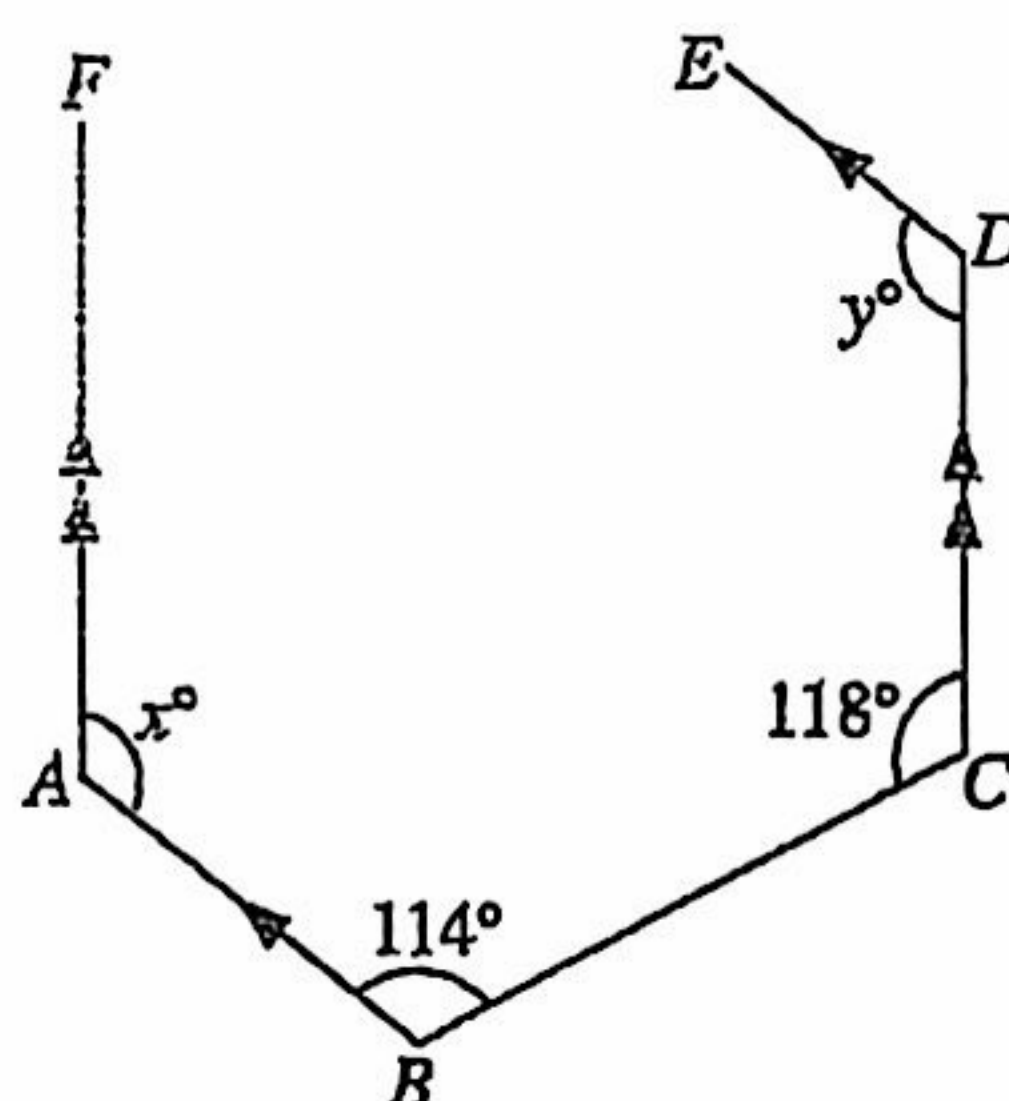
EOY Revision Worksheet 3

Name: _____ () Sec 1 _____ Date: _____

1. (a) In the figure, $AC \parallel DF$ and $AB \parallel CE$. Find the value of x and of y .



- (b) In the figure, $BA \parallel DE$ and $AF \parallel CD$. Find the value of x and of y .



2. 272 hours are required to complete a project. There are 4 men who are employed for this project.
- How long will it take for 4 men, each working 8.5 hours each day, to complete the project?
 - The hourly rate of each man is \$8.50. How much will it cost to employ them?
 - If the project is to be completed within 5 days, how many hours of overtime must each man put in per day?
 - Given that their overtime rate is 1.5 times of their hourly rate, find the total amount to be paid to the men if the project is to be completed within 5 days.

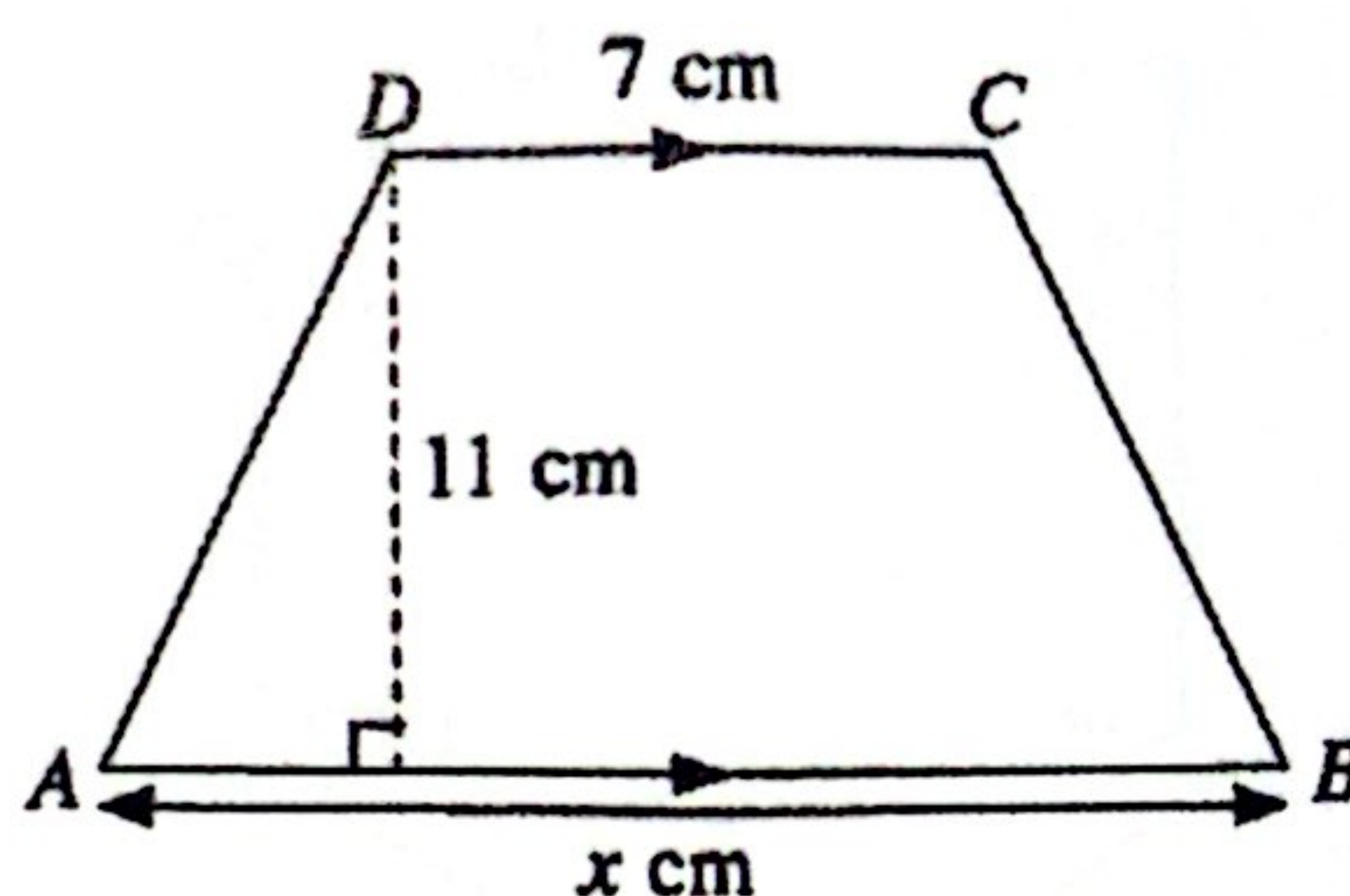


3. It is given that $-\frac{1}{18}ab + \frac{3}{4}(8a + b) - 2(3a - 4b) = \frac{(h - 2a)b}{k}$, where h and k are integers.
- Find the value of h and of k .
 - Is hk a prime or a composite number? Explain your answer.
 - Using your answer in (i), find the greatest whole number that will divide both h and k exactly.

4. Without using a calculator, find the value of each of the following.

(a) $-3\frac{2}{9} + \frac{7}{36} - \left(-\frac{11}{18}\right)$ (b) $\sqrt[3]{\frac{4}{9} \times \frac{14}{3} \div \left(-\frac{56}{27}\right)}$

5. (a) The diameter of the tyre of a lorry is 63 cm. Find the number of revolutions the tyre made if the lorry travelled a distance of 29.7 km.
(Take $\pi = \frac{22}{7}$.)
- (b) In the diagram, $ABCD$ is a trapezium.



If the area of the trapezium $ABCD$ is 121 cm^2 , find the value of x .

6. Answer the whole of this question on a sheet of plain paper.

Construct $\triangle ABC$ such that $AB = 12.4 \text{ cm}$, $BC = 6.4 \text{ cm}$ and $AC = 13.4 \text{ cm}$.

- Measure the size of the angle facing the longest side.
- Construct the bisector of the angle in (i).
- Construct the perpendicular bisector of BC .
- The two bisectors intersect at X .
Copy and complete the following statement:
The point X is equidistant from the points _____ and _____, and equidistant from the lines _____ and _____.
- Mark a possible point clearly inside the triangle, equidistant from B and C , and is nearer to BC than BA . Label this point P .



Answers:

- | | | | | |
|----|-------|--------------------|------|-----------------------------|
| 1. | (a) | $x = 145, y = 223$ | (b) | $x = 128, y = 128$ |
| 2. | (i) | 8 days | (ii) | \$2312 |
| | (iii) | 5.1 hours | (iv) | \$2745.50 |
| 3. | (i) | $h = 315, k = 36$ | (ii) | composite number |
| | (iii) | 9 | | |
| 4. | (a) | $-2\frac{5}{12}$ | (b) | -1 |
| 5. | (a) | 15 000 | (b) | $x = 15$ |
| 6. | (i) | 84° | (iv) | B and C ; AB and BC |