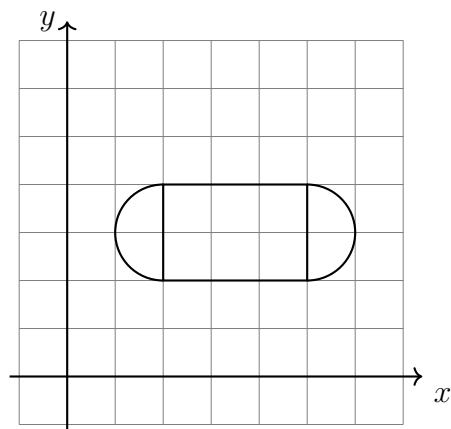


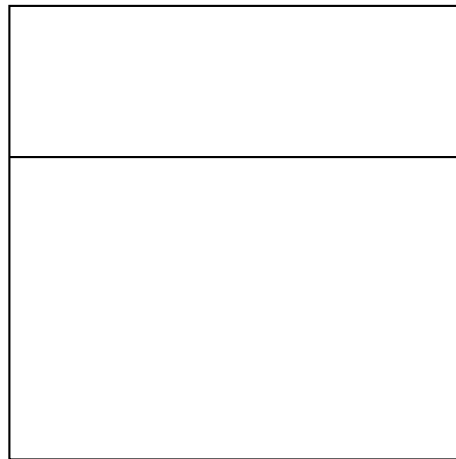
Name:

### 1.8 Classwork: Area of rectangles, triangles, parallelograms

1. Find the *area* of the shape shown below composed of a rectangle and two semi-circular caps. Leave your answer as an exact value in terms of  $\pi$ .



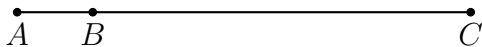
2. A square is partitioned into two rectangles. The sum of the perimeters of the two rectangles is 36. Find the area of the square.



3. Find the circumference of the earth's orbit around the sun.

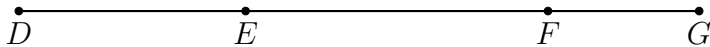
4. Given  $\overline{ABC}$ ,  $AB = \frac{2}{3}$ , and  $AC = 3\frac{1}{3}$ .

Find  $BC$ .



5. Given  $\overline{DEFG}$ ,  $DE = 3\frac{1}{4}$ ,  $EF = 6\frac{1}{4}$ , and  $FG = 1\frac{3}{4}$ . (diagram not to scale)

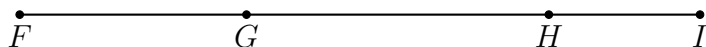
Find  $DG$ , expressed as a fraction, not a decimal.



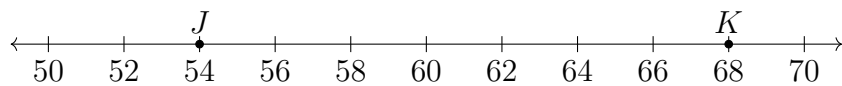
6. Given  $\overline{FGHI}$ ,  $FG = 8\frac{1}{6}$ ,  $GH = 12\frac{1}{3}$ , and  $HI = 5\frac{1}{2}$ . (diagram not to scale)

Find  $FI$ .

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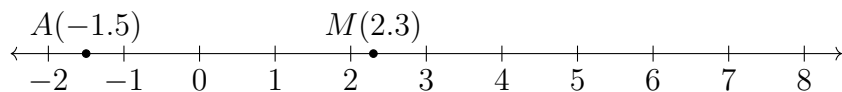


7. Given  $\overleftrightarrow{JK}$  as shown on the number line.

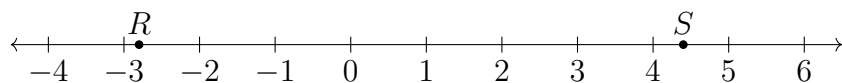


What is the midpoint between the points  $J$  and  $K$ ?

8. The point  $M(2.3)$  is the midpoint of segment  $\overline{AB}$ . Given  $A(-1.5)$ , find the value of  $B$ . Mark and label it below.



9. Given  $\overleftrightarrow{RS}$  as shown on the number line, with  $R = -2.8$  and  $S = 4.4$ .



The points  $T$  and  $U$  trisect  $\overline{RS}$ . Find their values, and mark and label them on the number line.

10. Given  $\overline{PQR}$ , with  $PQ = \frac{1}{2}x + 4$ ,  $QR = x + 3$ , and  $PR = 2x + 5$ . Find  $PR$ .