

1. Find the area of a rectangle of sides 8 cm and 5 cm.

2. Find the x-component of $(4,1)+(1,3)$.

3. Find the midpoint x-coordinate between $(0,0)$ and $(6,0)$.

4. Find the straight-line neighbour of 68° .

5. Find the diameter when radius is 5 cm.

6. The reverse bearing of 070° is 290° .

☐ True ☐ False

7. The sloping side of a parallelogram is always its perpendicular height.

☐ True ☐ False

8. The complete perimeter of a semicircle is half a circle's circumference.

☐ True ☐ False

9. A sector's arc length and perimeter are always the same.

☐ True ☐ False

10. If two vectors are parallel, any three points used in their diagrams must be collinear.

☐ True ☐ False

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1. **40.0**

Rectangle area= $8 \times 5 = 40 \text{ cm}^2$.

2. **5.0**

Add the x-components: $4+1=5$.

3. **3.0**

Midpoint x-coordinate= $(0+6)/2=3$.

4. **112.0**

$180-68=112^\circ$.

5. **10.0**

Diameter= $2 \times 5 = 10 \text{ cm}$.

6. **False**

A bearing is measured at the departure point, not the destination. Read clockwise from north rather than the acute angle to the nearest compass axis. The back bearing differs by 180° , even when the diagram is oblique.

7. **False**

Use perpendicular height rather than a sloping side. A shared internal division line is not part of the perimeter. An area answer has squared units; a perimeter answer has length units.

8. **False**

Radius must be halved from a given diameter before squaring. Half a circle's circumference is only its arc, not the complete semicircle perimeter. An internal join is not exposed boundary.

9. **False**

An arc length is not a sector perimeter. Use the angle as a fraction of 360° , not 180° . Radius is squared only for area, not arc length.

10. **False**

Keep $AB=b-a$, not $a-b$. Parallelism alone does not locate a line. A numerical example can check the algebra but cannot replace the general midpoint proof.