

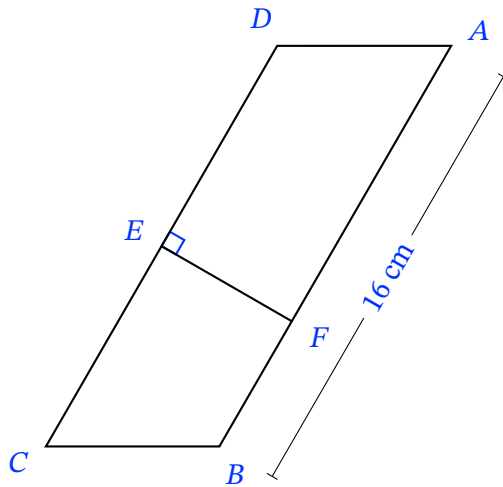
# Worksheet: Area of a Parallelogram



**Q1:** Given that  $ABCD$  is a parallelogram and  $EF = 6$  cm, find its area.



Question Video



A  $192 \text{ cm}^2$

B  $96 \text{ cm}^2$

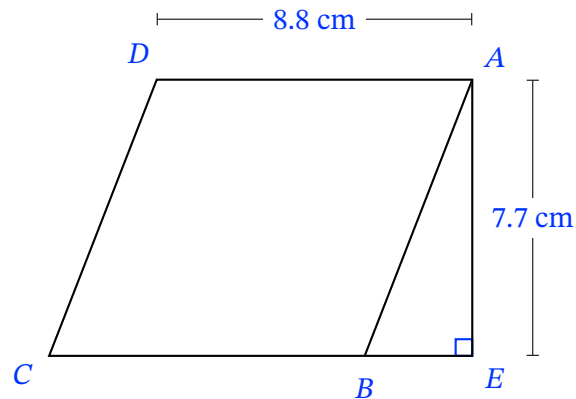
C  $44 \text{ cm}^2$

D  $48 \text{ cm}^2$

**Q2:** Find the area of the parallelogram  $ABCD$  where  $AB = 8.3$  cm.



Question Video



A  $67.76 \text{ cm}^2$

B  $34.2 \text{ cm}^2$

C  $73.04 \text{ cm}^2$

D  $33.88 \text{ cm}^2$

**Q3:** Find the area of a parallelogram having a height of  $18$  cm and a base length of  $12$  cm.

A  $432 \text{ cm}^2$

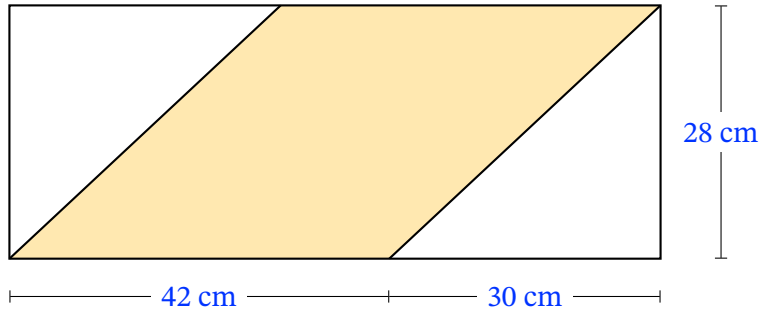
B  $108 \text{ cm}^2$

C  $216 \text{ cm}^2$

D  $30 \text{ cm}^2$

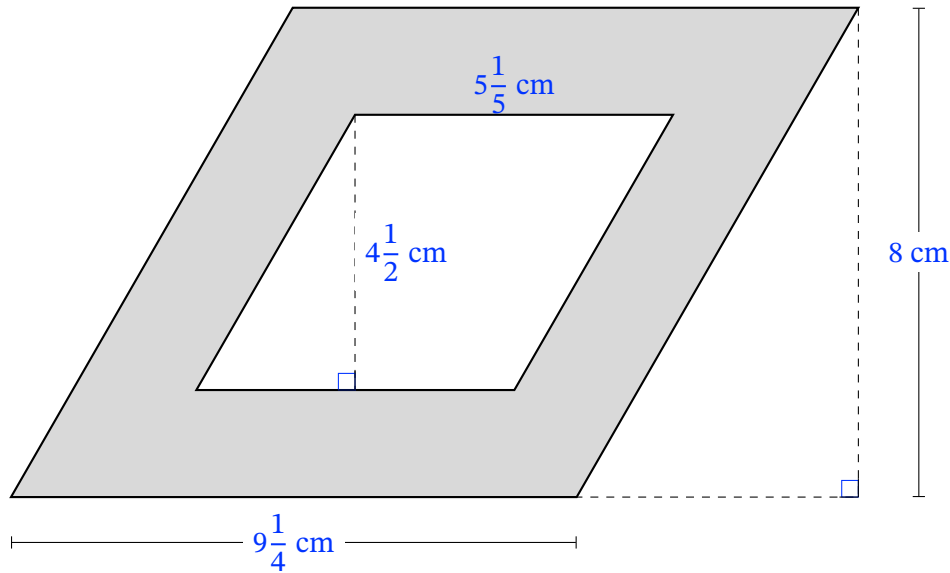
E  $60 \text{ cm}^2$

**Q4:** The given figure shows a parallelogram inside a rectangle. Determine the area inside the rectangle that is not occupied by the parallelogram.



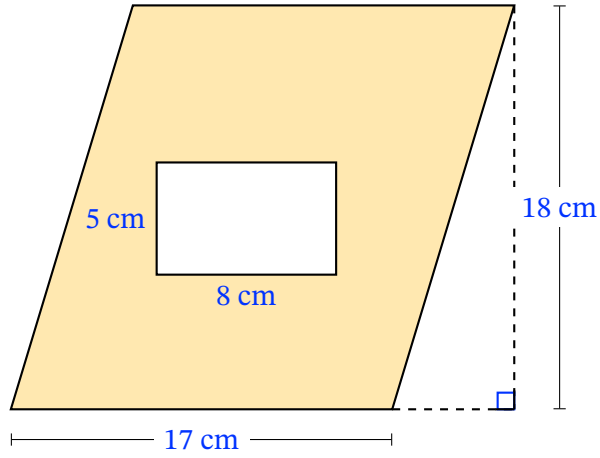
- A  $840 \text{ cm}^2$
- B  $1,680 \text{ cm}^2$
- C  $1,176 \text{ cm}^2$
- D  $588 \text{ cm}^2$
- E  $420 \text{ cm}^2$

**Q5:** The given figure shows one parallelogram inside another. Determine the area of the shaded part.



- A  $50\frac{3}{5}$  cm<sup>2</sup>
- B 74 cm<sup>2</sup>
- C  $25\frac{3}{10}$  cm<sup>2</sup>
- D  $23\frac{2}{5}$  cm<sup>2</sup>

**Q6:** The following figure represents a rectangle inside a parallelogram. What is the area of the colored region?



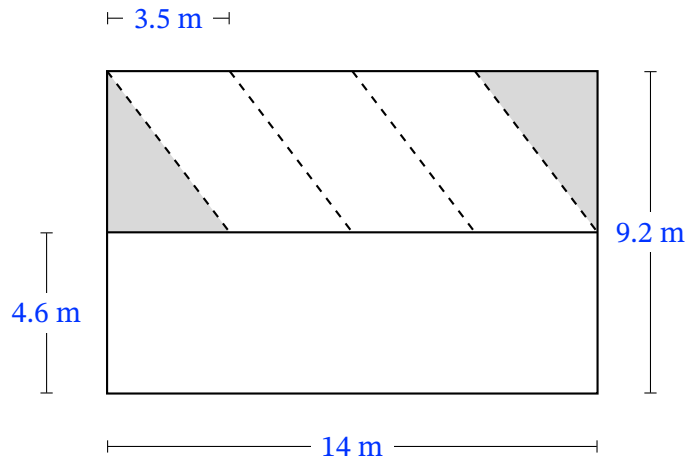
- A  $572 \text{ cm}^2$
- B  $266 \text{ cm}^2$
- C  $153 \text{ cm}^2$
- D  $113 \text{ cm}^2$
- E  $40 \text{ cm}^2$

**Q7:** The table shows the dimensions of parallelograms drawn by three students. Whose parallelogram has the largest area?

Student	Base (cm)	Height (cm)
James	$2\frac{1}{2}$	$3\frac{1}{5}$
Jacob	$2\frac{1}{3}$	$1\frac{2}{7}$
Mason	$1\frac{4}{9}$	$4\frac{2}{9}$

- A Jacob
- B Mason
- C James

**Q8:** The figure below represents the design of a rectangular piece of land whose dimensions are 14 m and 9.2 m, where it has three congruent places for parking cars that are in the shape of a parallelogram, two congruent places for planting flowers that are in the shape of a triangle, and a passage for cars that is in the shape of a rectangle whose width is 4.6 m. Determine the total area specified for parking cars and the total area for planting flowers respectively.

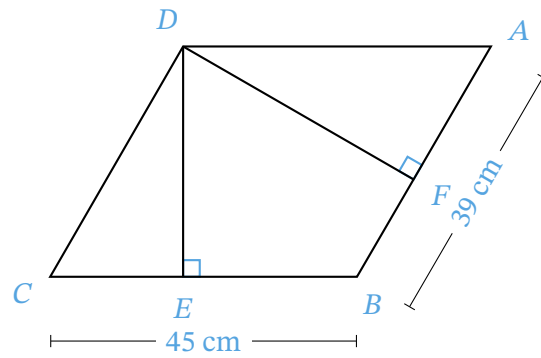


- A parking area =  $56.35 \text{ m}^2$ , garden area =  $16.1 \text{ m}^2$
- B parking area =  $48.3 \text{ m}^2$ , garden area =  $16.1 \text{ m}^2$
- C parking area =  $48.3 \text{ m}^2$ , garden area =  $8.05 \text{ m}^2$
- D parking area =  $56.35 \text{ m}^2$ , garden area =  $8.05 \text{ m}^2$

**Q9:** Find the base length of a parallelogram whose area is  $306 \text{ cm}^2$  and height is  $17 \text{ cm}$ .

- A 272 cm
- B 18 cm
- C 54 cm
- D 36 cm
- E 289 cm

**Q10:** Given that  $ABCD$  is a parallelogram and  $DE = 13 \text{ cm}$ , find the length of  $\overline{DF}$ .



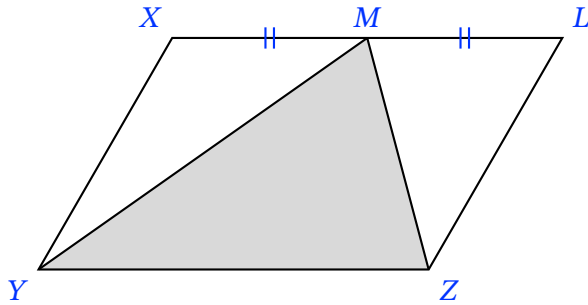
- A 45 cm
- B 39 cm
- C 13 cm
- D 15 cm



**Q11:** The lengths of two adjacent sides in a parallelogram are 20 cm and 25 cm. If its greater height is 23 cm, find its smaller height to the nearest centimeter.

- A 460 cm
- B 29 cm
- C 22 cm
- D 18 cm

**Q12:** Given that the area of the parallelogram  $XYZL$  is  $682 \text{ cm}^2$ , find the area of  $\triangle MLZ$ .

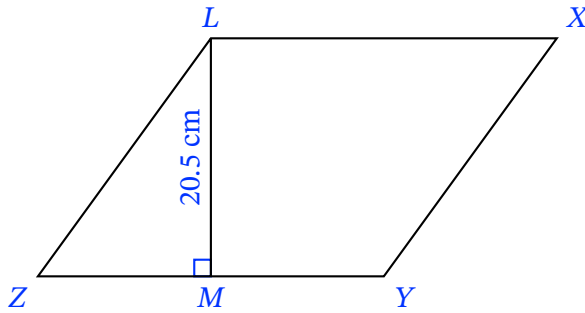


- A  $682 \text{ cm}^2$
- B  $170.5 \text{ cm}^2$
- C  $227.33 \text{ cm}^2$
- D  $341 \text{ cm}^2$

**Q13:** A parallelogram with area 301 has a base of 35. What is its height?

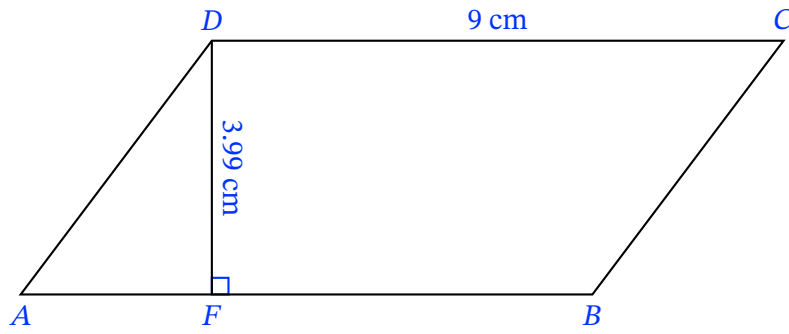
- A 17.2
- B 34.4
- C 8.6
- D 4.3

**Q14:** Given that the area of the parallelogram  $XYZL = 610.9 \text{ cm}^2$ , find the length of  $\overline{XL}$ .



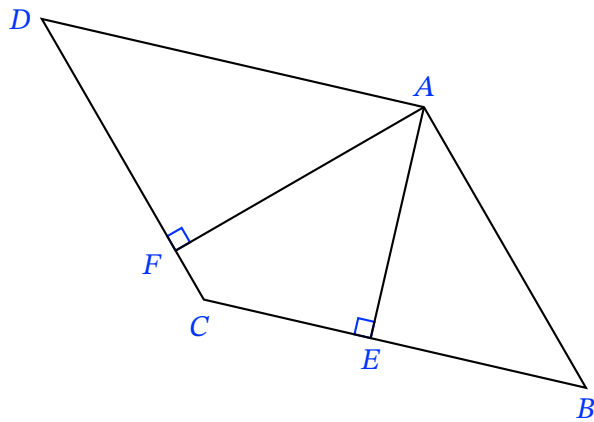
- A 59.6 cm
- B 14.9 cm
- C 20.5 cm
- D 29.8 cm

**Q15:** Find the area of the parallelogram  $ABCD$ .



- A  $17.96\text{ cm}^2$
- B  $19.95\text{ cm}^2$
- C  $9.98\text{ cm}^2$
- D  $35.91\text{ cm}^2$

**Q16:** If  $CB = 23$  cm,  $AE = 16$  cm, and  $AF = 20$  cm, find the area of the parallelogram  $CBAD$  and then determine the length of  $\overline{CD}$  to the nearest hundredth.



- A area of  $CBAD = 184.00 \text{ cm}^2$ ,  $CD = 18.40 \text{ cm}$
- B area of  $CBAD = 320.00 \text{ cm}^2$ ,  $CD = 16.00 \text{ cm}$
- C area of  $CBAD = 16.00 \text{ cm}^2$ ,  $CD = 320.00 \text{ cm}$
- D area of  $CBAD = 18.40 \text{ cm}^2$ ,  $CD = 368.00 \text{ cm}$
- E area of  $CBAD = 368.00 \text{ cm}^2$ ,  $CD = 18.40 \text{ cm}$

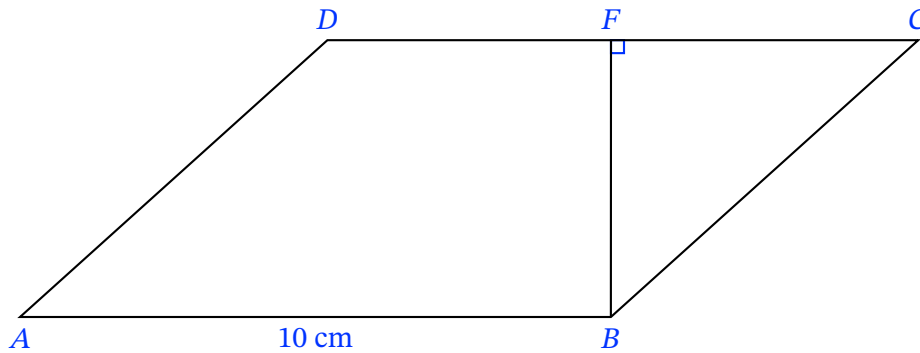
**Q17:** Determine the height of a parallelogram whose area is  $20 \text{ cm}^2$  and base length is  $4 \text{ cm}$ .

- A  $10 \text{ cm}$
- B  $6 \text{ cm}$
- C  $\frac{5}{2} \text{ cm}$
- D  $16 \text{ cm}$
- E  $5 \text{ cm}$

**Q18:** Find the area of the parallelogram  $ABCD$ , given that  $BF = 6.69 \text{ cm}$ .



Question Video



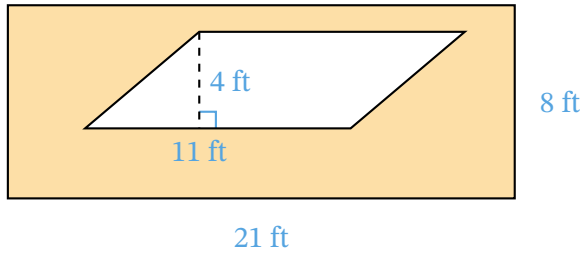
- A  $33.38 \text{ cm}^2$
- B  $66.9 \text{ cm}^2$
- C  $33.45 \text{ cm}^2$
- D  $133.8 \text{ cm}^2$

**Q19:** Daniel is doing a research project on the nation of Trinidad and Tobago. Part of the project is to paint a replica of the nation's flag. Determine the area of the black part of the flag.



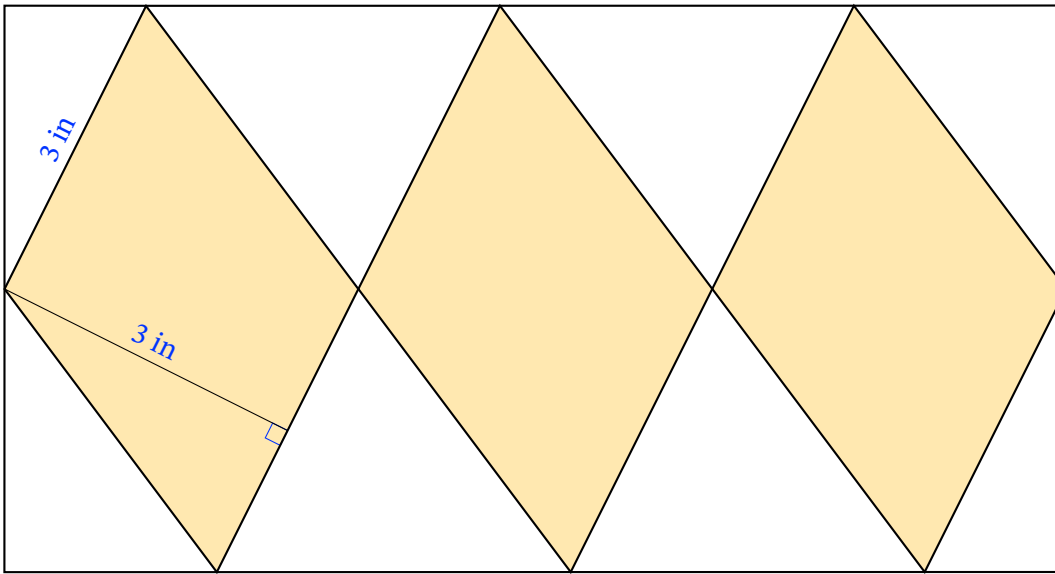
- A  $40\frac{1}{9}$  in<sup>2</sup>
- B  $60\frac{1}{6}$  in<sup>2</sup>
- C  $80\frac{2}{9}$  in<sup>2</sup>
- D  $160\frac{4}{9}$  in<sup>2</sup>

**Q20:** Determine the area of the colored part in the shown rectangle that has a parallelogram inside of it.



- A  $157 \text{ ft}^2$
- B  $22 \text{ ft}^2$
- C  $146 \text{ ft}^2$
- D  $124 \text{ ft}^2$
- E  $168 \text{ ft}^2$

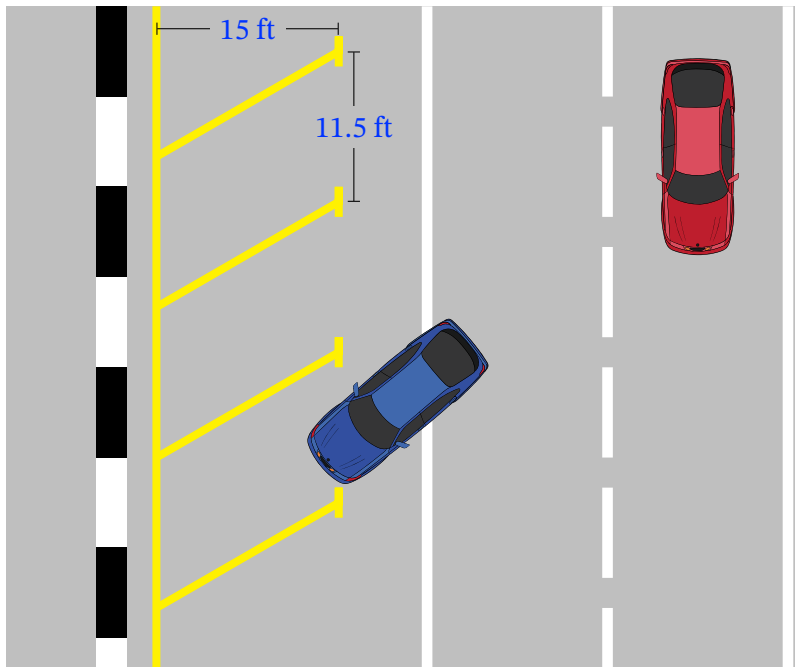
**Q21:** In this wallpaper design, what is the area of the shaded parallelograms?



- A  $13.5 \text{ in}^2$
- B  $9 \text{ in}^2$
- C  $36 \text{ in}^2$
- D  $18 \text{ in}^2$
- E  $27 \text{ in}^2$

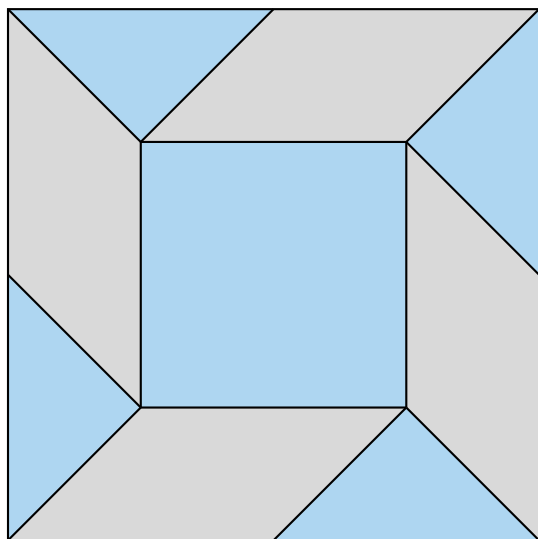


**Q22:** A town requires each parking space to have a minimum area of 169 square feet. Do the measurements of the parking spaces shown meet the requirements? State the area of each parking space.



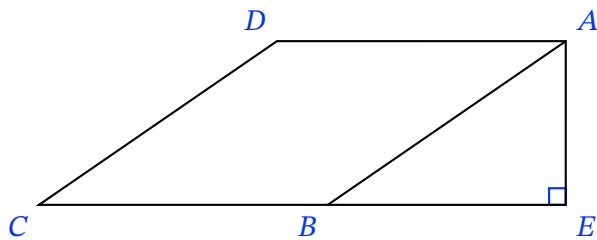
- A yes, 345 ft<sup>2</sup>
- B no, 26.5 ft<sup>2</sup>
- C no, 53 ft<sup>2</sup>
- D yes, 172.5 ft<sup>2</sup>
- E no, 86.25 ft<sup>2</sup>

**Q23:** Each parallelogram-shaped piece in the quilt block shown has height  $12\frac{3}{4}$  inches and base  $25\frac{1}{2}$  inches. How many square feet of fabric is required for 16 blocks ?



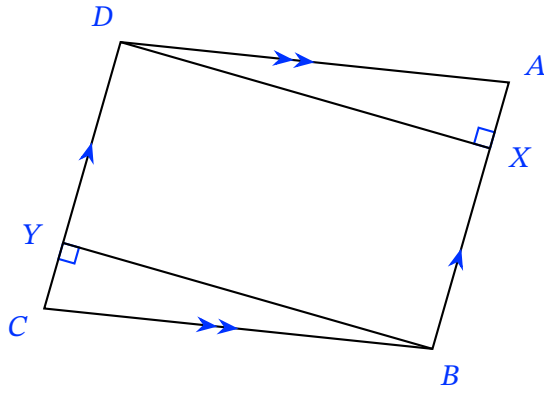
- A  $144\frac{1}{2} \text{ ft}^2$
- B  $20,808 \text{ ft}^2$
- C  $1,734 \text{ ft}^2$
- D  $72\frac{1}{4} \text{ ft}^2$
- E  $867 \text{ ft}^2$

**Q24:** Given that  $ABCD$  is a parallelogram whose area is  $2,643.21 \text{ cm}^2$  and  $BC = 68.3 \text{ cm}$ , find the length of  $\overline{AE}$ .



- A 77.4 cm
- B 38.7 cm
- C 34.15 cm
- D 68.3 cm

**Q25:** Given that  $ABCD$  is a parallelogram of area  $61.1 \text{ cm}^2$ ,  $XYD$  is a rectangle of area  $46.06 \text{ cm}^2$ , and  $AX = 1.6 \text{ cm}$ , find the perimeter of the rectangle  $XYD$ .



- A 22 cm
- B 11 cm
- C 28.6 cm
- D 14.3 cm