Name _____

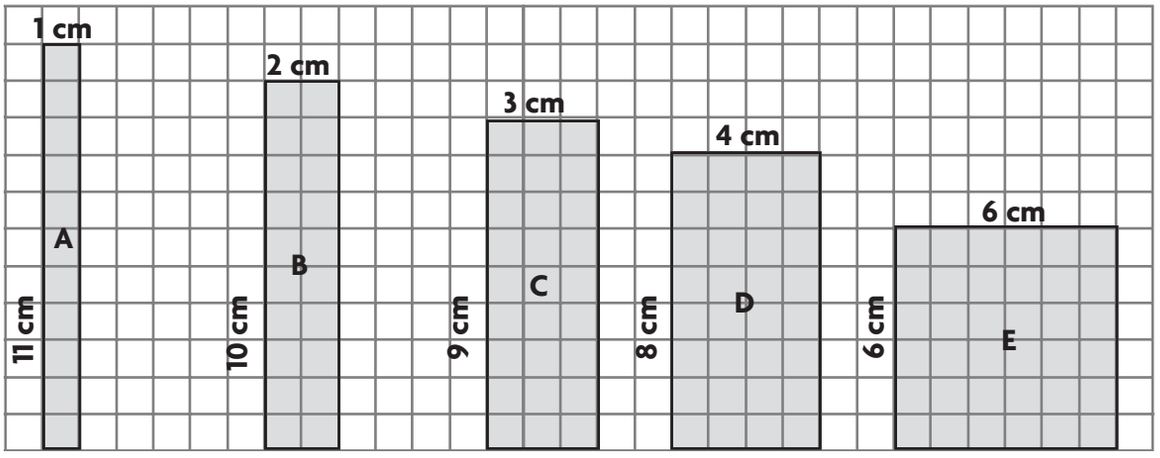
LESSON 26.3

Relate Perimeter and Area

Rectangles with the same perimeter can have different areas.

Look at the rectangles below. Each rectangle has a perimeter of 24 cm, but their areas are different.

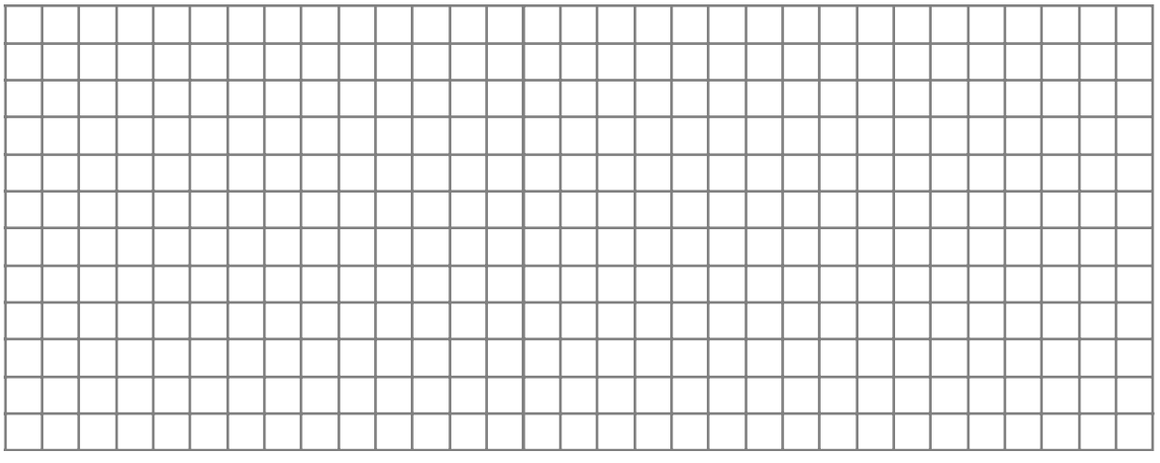
> Remember. . .
> Area (A) = length (l) × width (w)



Rectangle A:	Rectangle B:	Rectangle C:	Rectangle D:	Rectangle E:
1 cm × 11 cm	2 cm × 10 cm	3 cm × 9 cm	4 cm × 8 cm	6 cm × 6 cm
Area = 11 cm^2	Area = 20 cm^2	Area = 27 cm^2	Area = 32 cm^2	Area = 36 cm^2

Rectangle E is the rectangle with the greatest area, 36 cm^2.

Use the grid to draw rectangles for the given perimeter. Name the length and width of the rectangle with the greatest area.



1. Perimeter = 12 cm

_____

2. Perimeter = 28 cm

_____

Name _____

LESSON 26.3

Relate Perimeter and Area

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Look at the rectangles below. Each rectangle has a perimeter of 24 cm, but their areas are different.

> Remember. . .
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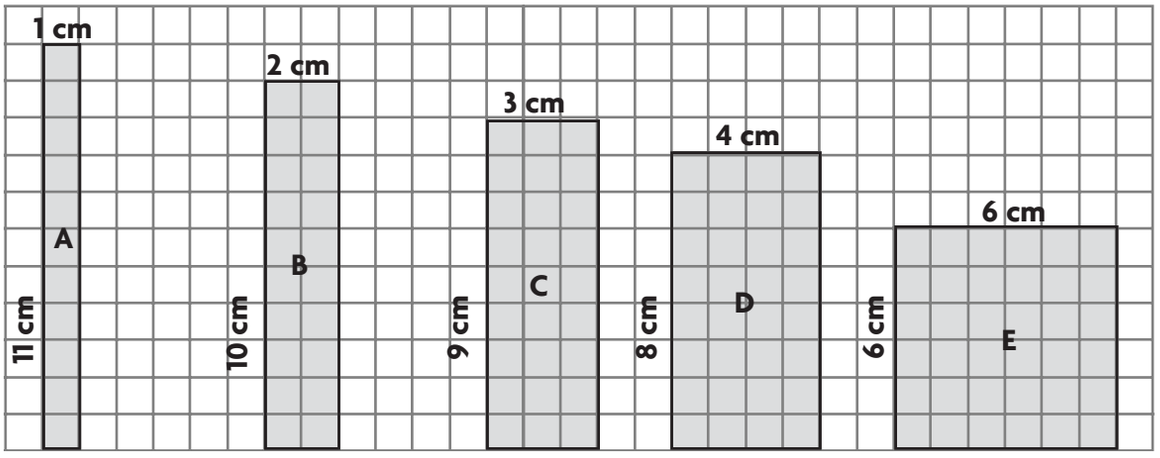

Rectangle A:	Rectangle B:	Rectangle C:	Rectangle D:	Rectangle E:
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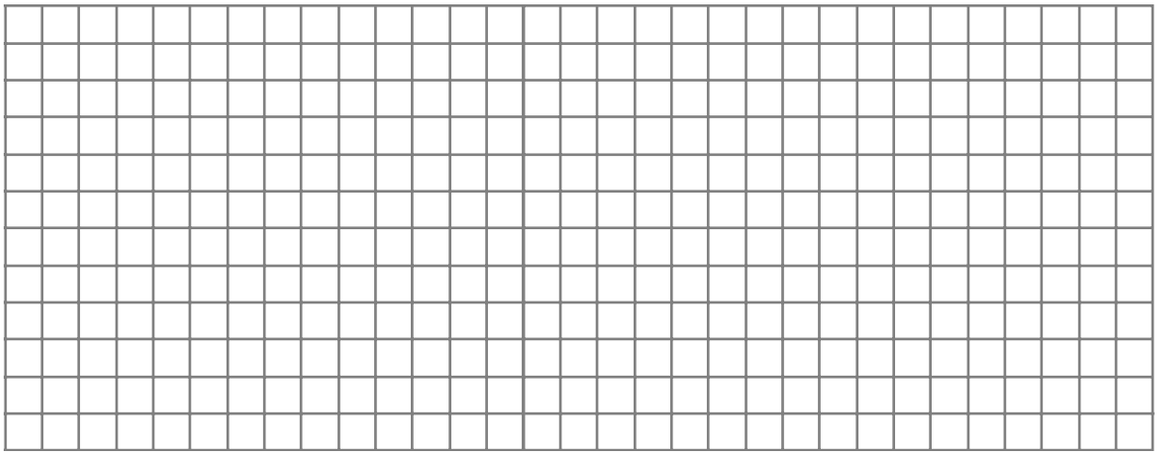
Rectangle E is the rectangle with the greatest area, 36 cm^2.

Use the grid to draw rectangles for the given perimeter. Name the length and width of the rectangle with the greatest area.

Check students' drawings.



1. Perimeter = 12 cm

l = 3 cm, *w* = 3 cm

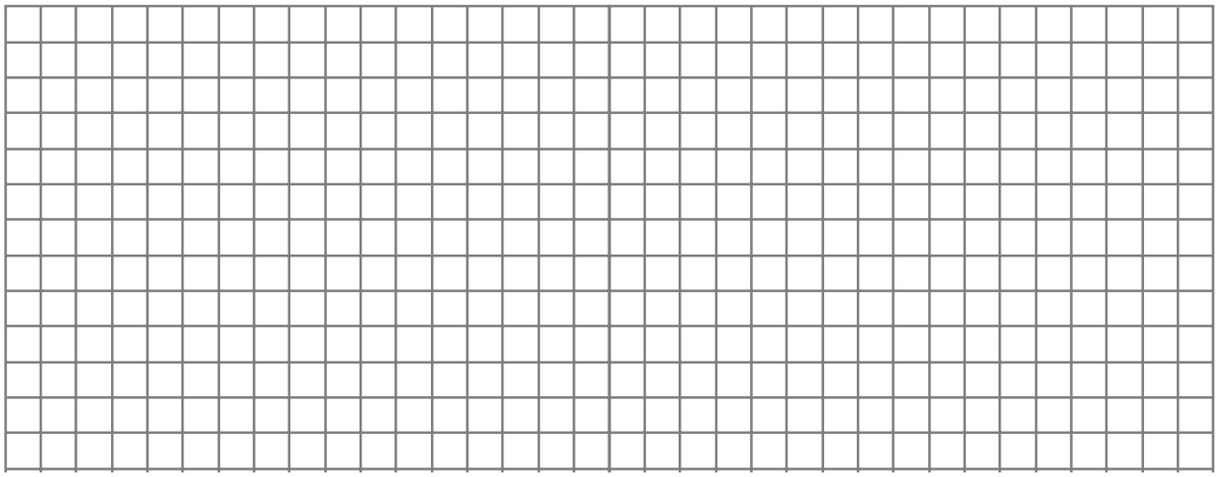
2. Perimeter = 28 cm

l = 7 cm, *w* = 7 cm

Name _____

Relate Perimeter and Area

Use the grid below to draw rectangles for the given perimeter.
Find the length and width of the rectangle with the greatest area.
(Use whole numbers only.)



1. 50 cm _____

2. 34 cm _____

3. 12 cm _____

For the given area, find the length and width of the rectangle with the least perimeter. (Use whole numbers only.)

4. 30 cm^2 _____

5. 12 cm^2 _____

6. 21 cm^2 _____

7. 50 cm^2 _____

8. 4 cm^2 _____

9. 48 cm^2 _____

Mixed Review

10. What is the least common multiple of 15 and 10? _____

11. Change $\frac{1}{20}$ to a decimal. _____

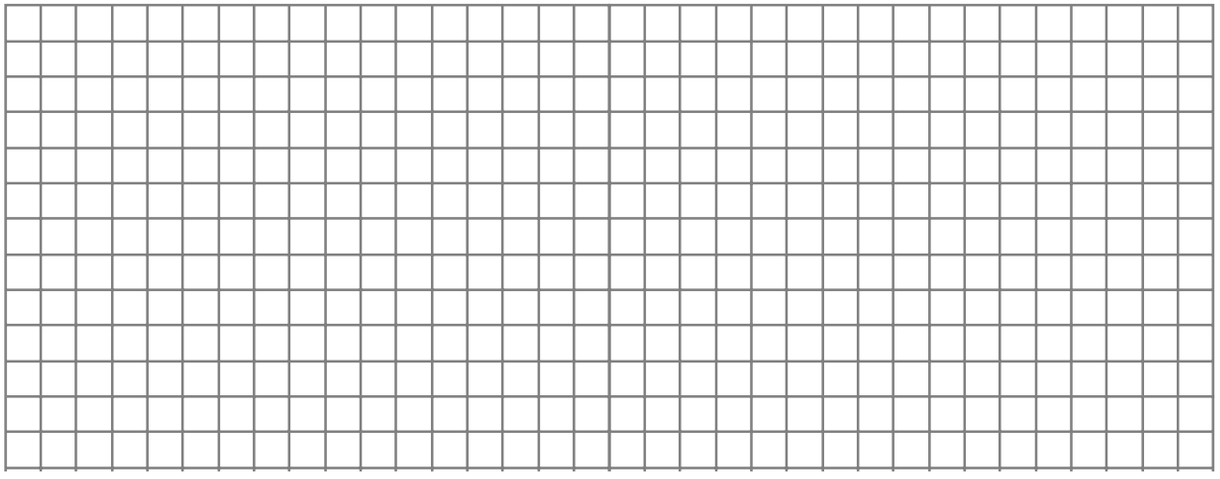
12. $\frac{1}{3} + \frac{2}{5}$ _____

13. Change 42 inches to feet. _____

Name _____

Relate Perimeter and Area

Use the grid below to draw rectangles for the given perimeter.
Find the length and width of the rectangle with the greatest area.
(Use whole numbers only.) **Check students' drawings.**



1. 50 cm

l = 13 cm, *w* = 12 cm

2. 34 cm

l = 9 cm, *w* = 8 cm

3. 12 cm

l = 3 cm, *w* = 3 cm

For the given area, find the length and width of the rectangle with the least perimeter. (Use whole numbers only.)

4. 30 cm^2

l = 6 cm, *w* = 5 cm

5. 12 cm^2

l = 4 cm, *w* = 3 cm

6. 21 cm^2

l = 7 cm, *w* = 3 cm

7. 50 cm^2

l = 10 cm, *w* = 5 cm

8. 4 cm^2

l = 2 cm, *w* = 2 cm

9. 48 cm^2

l = 8 cm, *w* = 6 cm

Mixed Review

10. What is the least common multiple of 15 and 10?

30

11. Change $\frac{1}{20}$ to a decimal.

0.05

12. $\frac{1}{3} + \frac{2}{5}$

$\frac{11}{15}$

13. Change 42 inches to feet.

3 ft 6 in., or $3\frac{1}{2}$ ft

Name _____

Rectangle Challenge

There are 7 different rectangles with a perimeter of 28 feet and whole-number dimensions. Sketch and label each rectangle, and then list the perimeter and area of each.

Sketch	Perimeter	Area
1.	28 ft	
2.	28 ft	
3.	28 ft	
4.	28 ft	
5.	28 ft	
6.	28 ft	
7.	28 ft	

8. What is the average area of these rectangles? _____

Name _____

LESSON 26.3

Rectangle Challenge

There are 7 different rectangles with a perimeter of 28 feet and whole-number dimensions. Sketch and label each rectangle, and then list the perimeter and area of each. **Check students' drawings.**

Sketch	Perimeter	Area
1. 1 × 13	28 ft	13 sq ft
2. 2 × 12	28 ft	24 sq ft
3. 3 × 11	28 ft	33 sq ft
4. 4 × 10	28 ft	40 sq ft
5. 5 × 9	28 ft	45 sq ft
6. 6 × 8	28 ft	48 sq ft
7. 7 × 7	28 ft	49 sq ft

8. What is the average area of these rectangles? 36 sq ft