## Questions

1) Emily's bathroom is a rectangular shape measuring 12 feet by 10 feet. She would like to cover the floor with tiles with the shape and size shown at the right (numbers represent feet). How many tiles will she need?


7 A rectangle has a perimeter of 24 cm and one side is twice as long as another. What, in square centimetres, is the rectangle's area?
A) 12
B) 16
C) 20
D) 24
E) 32
16. Both figures on the right are formed from the same five pieces. One of the pieces is a rectangle with a length of 10 cm and a width of 5 cm , and the other pieces are quarters of two different circles. What is the difference in the perimeter lengths of the figures?
(A) 2.5 cm
(B) 5 cm
(C) 10 cm
(D) 20 cm
(E) 30 cm

29. A square-shaped piece of paper is folded twice as shown in the picture. The area of the original square is $64 \mathrm{~cm}^{2}$. What is the total area of the shaded rectangles?

(A) $15 \mathrm{~cm}^{2}$
(B) $10 \mathrm{~cm}^{2}$
(C) $16 \mathrm{~cm}^{2}$
(D) $24 \mathrm{~cm}^{2}$
(E) $14 \mathrm{~cm}^{2}$

16 In the figure, $A B C D$ is a rectangle; $E$ is the midpoint of $A B ; F$ is the midpoint of $B C$. What is the ratio between the area of the rectangle $A B C D$ and the area of the triangle AEF?
A) $4: 1$
B) $8: 1$
C) $16: 1$
D) $5: 2$
E) $3: 2$

5. A square of perimeter 48 cm is cut into 2 pieces to make a rectangle (see the picture).


What is the perimeter of the rectangle?
(A) 24 cm
(B) 30 cm
(C) 48 cm
(D) 60 cm
(E) 72 cm
30. A rectangle with a perimeter of 34 cm was divided into two smaller rectangles with perimeters 28 cm and 30 cm , as shown in the figure.


What is the area of the big rectangle?
(A) $88 \mathrm{~cm}^{2}$
(B) $120 \mathrm{~cm}^{2}$
(C) $187 \mathrm{~cm}^{2}$
(D) $60 \mathrm{~cm}^{2}$
(E) $49 \mathrm{~cm}^{2}$

What is the area of the following shape (the numbers are lengths)?

23. Rectangle $A B C D$ is cut into four smaller rectangles, as shown in the figure. The four smaller rectangles have the following properties: (a) the perimeters of three of them are 11, 16 and 19; (b) the perimeter of the fourth is neither the biggest nor the smallest of the four. What is the perimeter of the original rectangle $A B C D$ ?

(A) 30
(B) 40
(C) 38
(D) 32
(E) 28

