

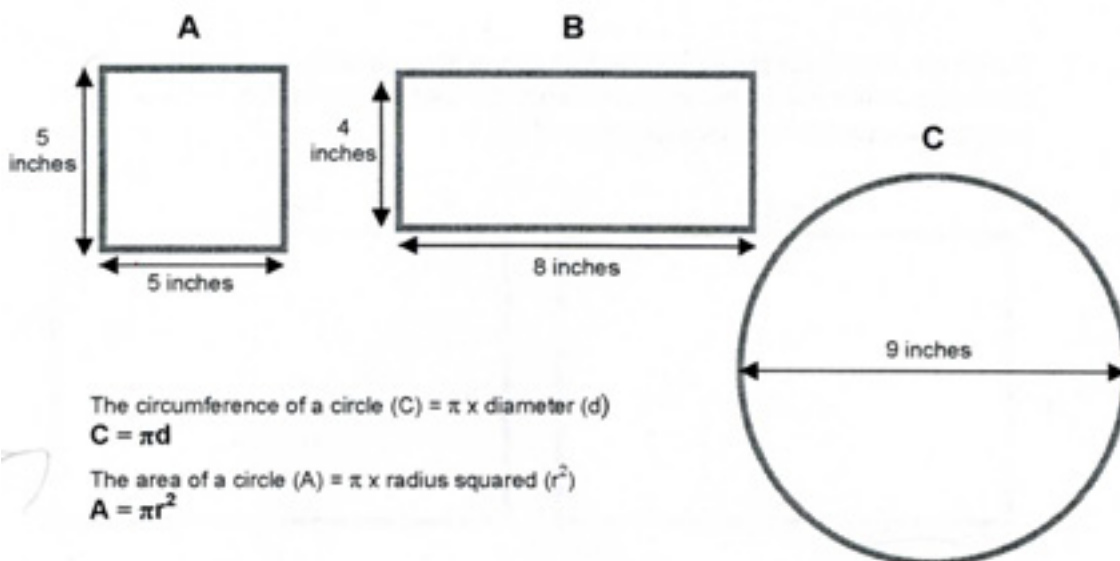
## Pizza Crusts

This problem gives you the chance to:

- find areas and perimeters of rectangular and circular shapes in a practical context

Robbie loves the stuffed crusts on pizzas.

Here are some stuffed crust pizza shapes that are baked.



1. How many inches of stuffed crust are put around the edge of each of these pizzas?

A 15.7 inches

B 25.12 inches

C 28.26 inches

Show your calculations.

$$\begin{array}{r} 3.14 \\ \times 5 \\ \hline 15.70 \end{array}$$

$$\begin{array}{r} 3.14 \\ \times 8 \\ \hline 25.12 \end{array}$$

$$\begin{array}{r} 3.14 \\ \times 9 \\ \hline 28.26 \end{array}$$

2. Here is a square pizza with an area of 36 square inches.

(a) What length of stuffed crust will be around the edge?

$$\begin{array}{r} 9 \\ \times 4 \\ \hline 36 \end{array}$$

36 inches

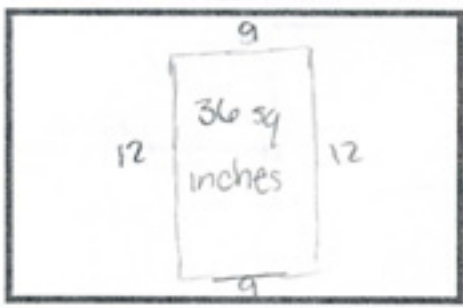


X

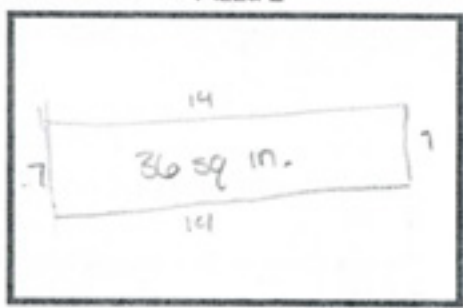
O

(b) Design two rectangular pizzas, each with an area of 36 square inches, with different perimeters, so that Robbie will have more crust than on the square pizza. In each case calculate what the perimeter will be.

Pizza 1



Pizza 2



$$\frac{9}{2} + \frac{12}{2} = 4.5 + 6 = 10.5$$

Perimeter of Pizza 1 42 inches

Perimeter of Pizza 2 42 inches

X

X

C

C

3. What is the circumference of a round pizza with an area of 36 square inches?

56.52 inches

Explain how you figured this out.

In square in.  $36 \div 2 = 18$  and multiplication to pie which is 3.14.

$$\begin{array}{r} 18 \\ 2 \overline{) 36} \\ \underline{24} \\ 12 \\ \underline{10} \\ 2 \end{array} \quad \begin{array}{r} 3.14 \\ \times 18 \\ \hline 2512 \\ 314 \\ \hline 56.52 \end{array}$$

8

C

C

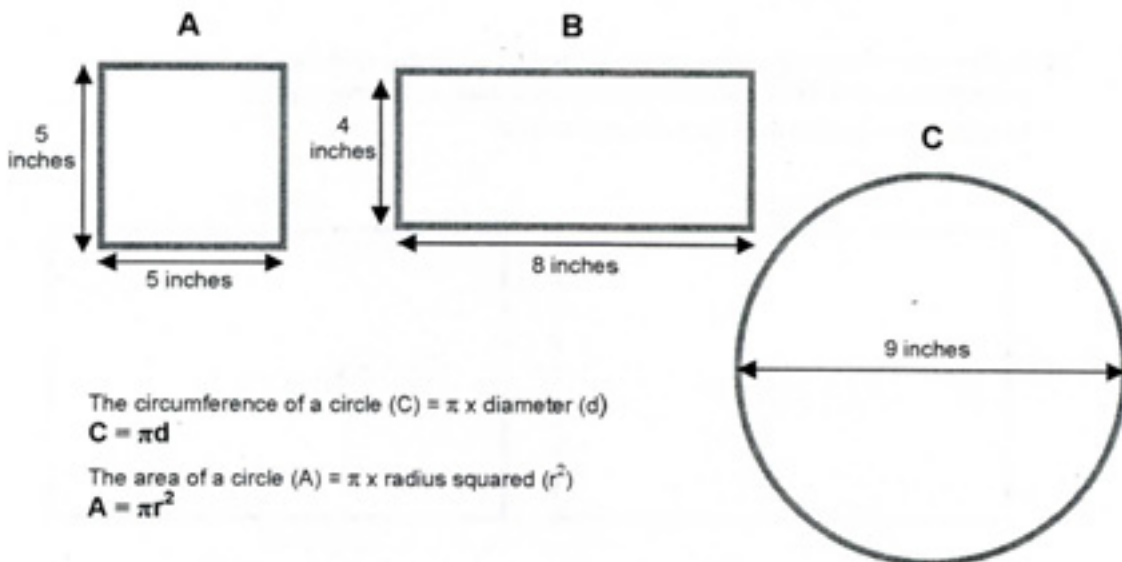
## Pizza Crusts

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Robbie loves the stuffed crusts on pizzas.

Here are some stuffed crust pizza shapes that are baked.



1. How many inches of stuffed crust are put around the edge of each of these pizzas?

A 20 ✓ inches

B 24 ✓ inches

C 28.53 ✓ inches

Show your calculations.

$$\begin{array}{r} 5 \\ \times 4 \\ \hline 20 \end{array} \checkmark$$

$$\begin{array}{r} 4 \\ \times 2 \\ \hline 16 \end{array}$$

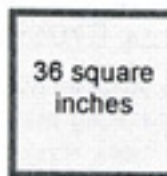
$$\begin{array}{r} 31.6 \\ \times 9 \\ \hline 285.3 \end{array} \checkmark$$

$$\begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 16 \\ \times 3 \\ \hline 24 \end{array} \checkmark$$

2. Here is a square pizza with an area of 36 square inches.

(a) What length of stuffed crust will be around the edge?



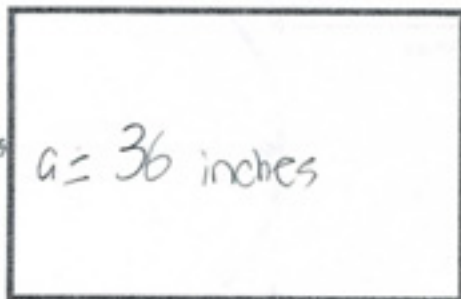
$$\begin{array}{r} 9 \\ 4 \overline{) 36} \\ \underline{36} \\ 0 \end{array}$$

9 inches  
X

0

(b) Design two rectangular pizzas, each with an area of 36 square inches, with different perimeters, so that Robbie will have more crust than on the square pizza. In each case calculate what the perimeter will be.

Pizza 1

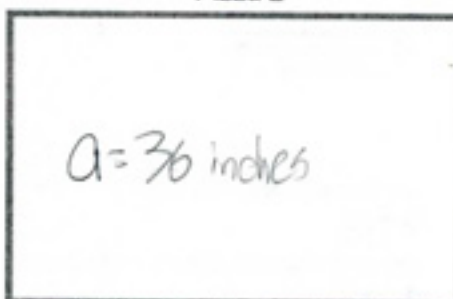


9 inches

4 inches

Perimeter of Pizza 1 26 inches

Pizza 2



3 inches

12 inches

Perimeter of Pizza 2 30 inches

3. What is the circumference of a round pizza with an area of 36 square inches?

57.06 inches

Explain how you figured this out.

I multiplied 3.14 by 36 and got 114.12. Then I divided 114.12 by 2 and got 57.06.

8



9-508 page 1  
5°

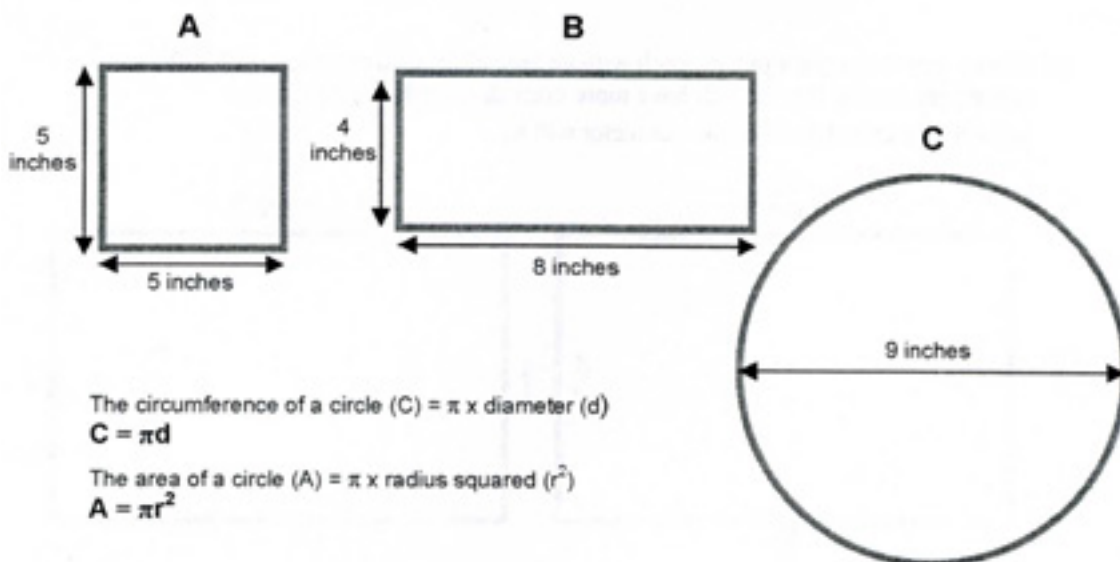
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The circumference of a circle (C) =  $\pi \times \text{diameter (d)}$

$$C = \pi d$$

The area of a circle (A) =  $\pi \times \text{radius squared (r}^2\text{)}$

$$A = \pi r^2$$

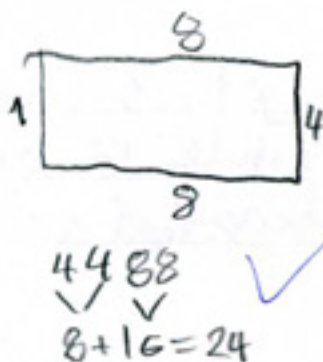
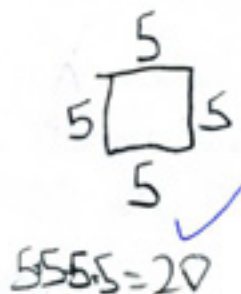
1. How many inches of stuffed crust are put around the edge of each of these pizzas?

A 20 inches ✓

B 24 inches ✓

C 18 inches ✗

Show your calculations.

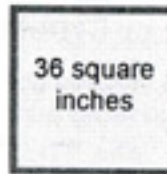




2. Here is a square pizza with an area of 36 square inches.

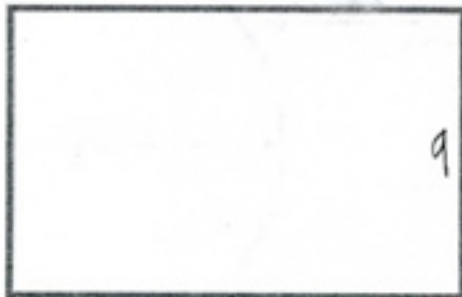
(a) What length of stuffed crust will be around the edge?

40 inches



(b) Design two rectangular pizzas, each with an area of 36 square inches, with different perimeters, so that Robbie will have more crust than on the square pizza. In each case calculate what the perimeter will be.

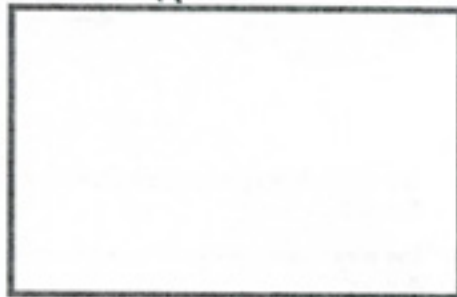
9  
Pizza 1



Perimeter of Pizza 1 36 inches



11 Pizza 2



Perimeter of Pizza 2 36 inches



3. What is the circumference of a round pizza with an area of 36 square inches?

36 inches



Explain how you figured this out.

I divided 36 got 13 made the height of the circle 13 and the width 13 add them together and got 36 again



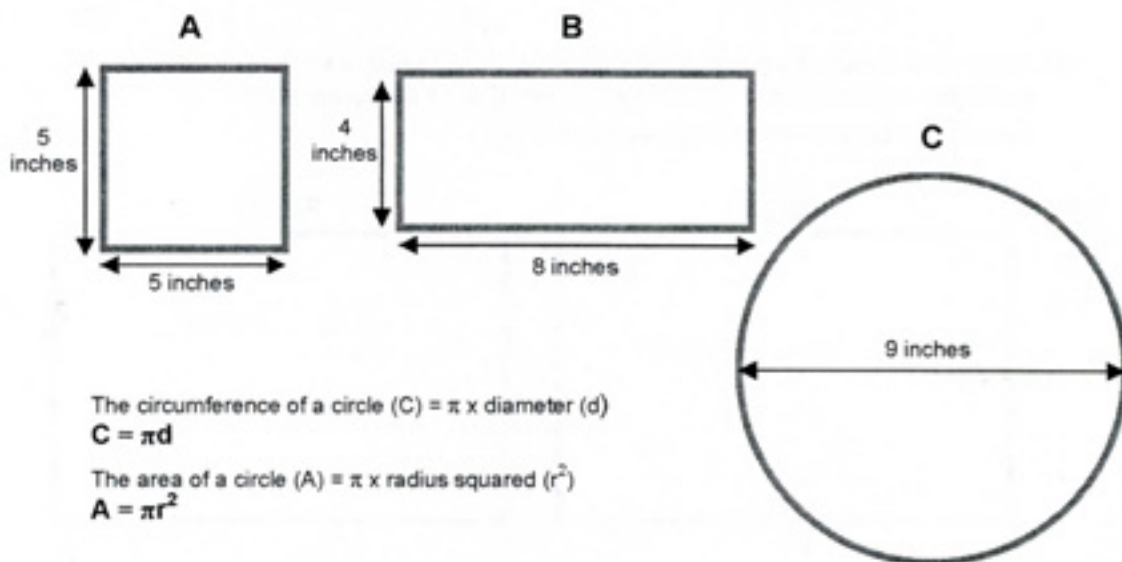
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$$C = \pi d$$

The area of a circle (A) =  $\pi \times$  radius squared ( $r^2$ )

$$A = \pi r^2$$

1. How many inches of stuffed crust are put around the edge of each of these pizzas?

A 20 inches ✓

B 24 inches ✓

C 28.26 inches ✓

Show your calculations.

$$\begin{array}{r} 5 \\ \times 4 \\ \hline 20 \end{array}$$

$$\begin{array}{r} 4 \quad 8 \\ \times 2 \quad \times 2 \\ \hline 8 \quad 16 \end{array}$$

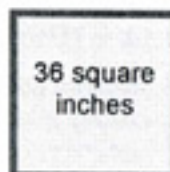
$$\begin{array}{r} 28.26 \\ \times 9 \\ \hline 28.26 \end{array}$$

$$\begin{array}{r} 8 \\ +16 \\ \hline 24 \end{array}$$

2. Here is a square pizza with an area of 36 square inches.

(a) What length of stuffed crust will be around the edge?

9 inches



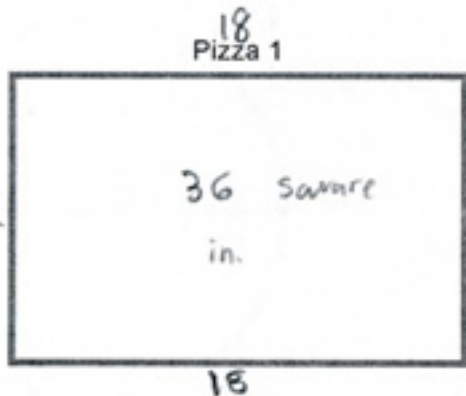
$$\begin{array}{r} 9 \\ 4 \overline{)36} \\ \underline{36} \\ 00 \end{array}$$

0

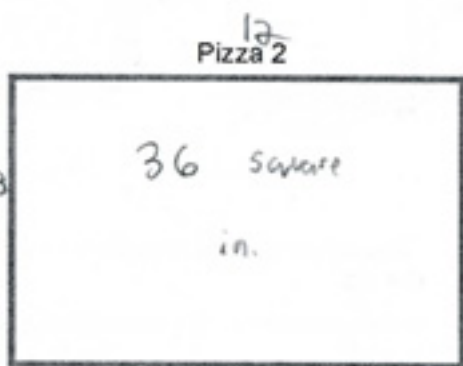
(b) Design two rectangular pizzas, each with an area of 36 square inches, with different perimeters, so that Robbie will have more crust than on the square pizza. In each case calculate what the perimeter will be.

$$\begin{array}{r} 18 \\ 2 \overline{)36} \\ \underline{36} \\ 00 \end{array}$$

$$\begin{array}{r} 2 \\ \times 18 \\ \hline 36 \end{array}$$



Perimeter of Pizza 1 40 inches



Perimeter of Pizza 2 30 inches

$$\begin{array}{r} 12 \\ 3 \overline{)36} \\ \underline{36} \\ 00 \end{array}$$

3. What is the circumference of a round pizza with an area of 36 square inches?

                     inches

Explain how you figured this out.

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$$6 \times 6 = 36$$

$$r = 6$$

$$3.14 \sqrt{6}$$

8



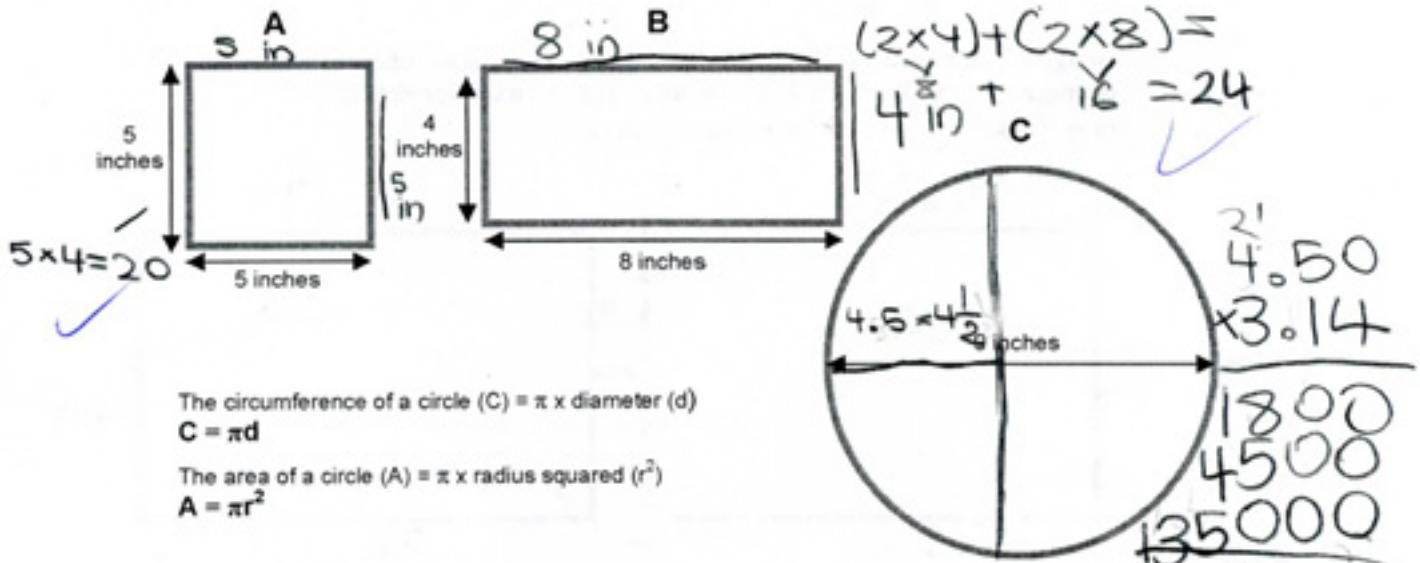
## Pizza Crusts

This problem gives you the chance to:

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Robbie loves the stuffed crusts on pizzas.

Here are some stuffed crust pizza shapes that are baked.



The circumference of a circle (C) =  $\pi \times$  diameter (d)

$$C = \pi d$$

The area of a circle (A) =  $\pi \times$  radius squared ( $r^2$ )

$$A = \pi r^2$$

1. How many inches of stuffed crust are put around the edge of each of these pizzas?

A 20 ✓ inches

B 24 ✓ inches

C 14 ≈ inches ✗

Show your calculations.

14.1300  
1  
1  
0

2. Here is a square pizza with an area of 36 square inches.

$$\begin{array}{r} 9 \\ 4 \overline{)36} \\ \underline{36} \\ 0 \end{array}$$

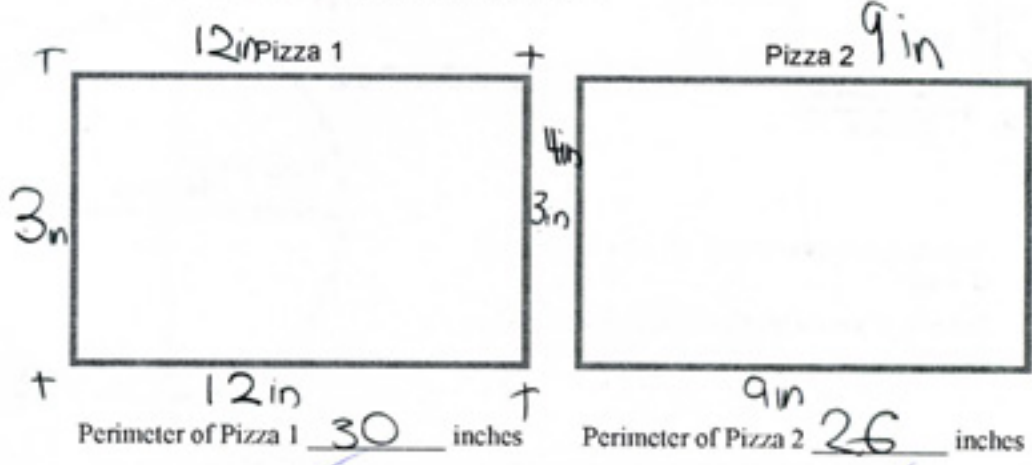


(a) What length of stuffed crust will be around the edge?

9 inches

0

(b) Design two rectangular pizzas, each with an area of 36 square inches, with different perimeters, so that Robbie will have more crust than on the square pizza. In each case calculate what the perimeter will be.



30 / 2 = 15  
15 - 3 = 12

4 in + 4 in = 8 in  
8 in + 8 in = 16 in  
16 in + 10 in = 26 in

3. What is the circumference of a round pizza with an area of 36 square inches?

57 inches

Explain how you figured this out.

Divide 36 by 2 and then multiply. After round to the nearest tenths.



$$\begin{array}{r} 14 \\ 2 \overline{)36} \\ \underline{36} \\ 0 \end{array}$$

$$\begin{array}{r} 314 \\ \times 18 \\ \hline 2512 \\ 3140 \\ \hline 5652 \end{array}$$

8

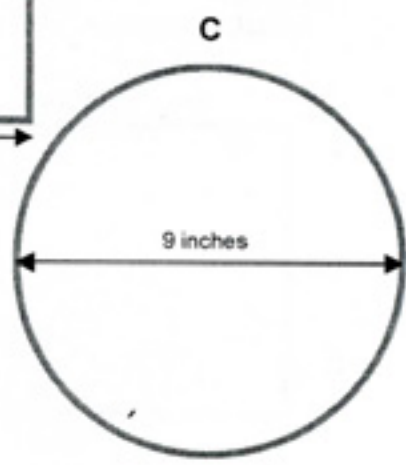
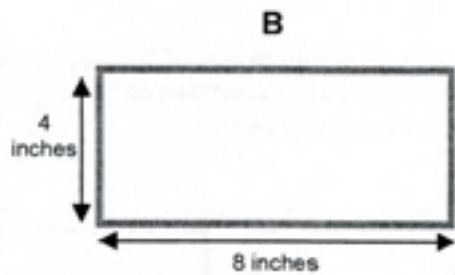
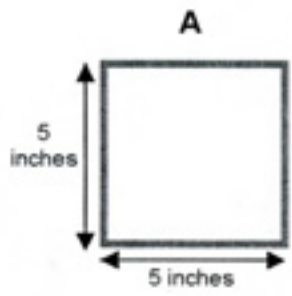
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1. How many inches of stuffed crust are put around the edge of each of these pizzas?

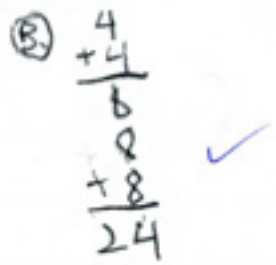
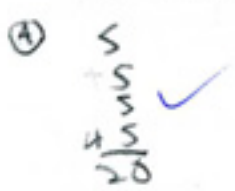
A 20 inches ✓

B 24 inches ✓

C 9 inches ✗

Show your calculations.

(A)

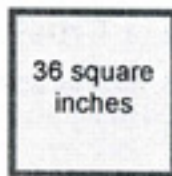


(C)



1  
1  
0

2. Here is a square pizza with an area of 36 square inches.



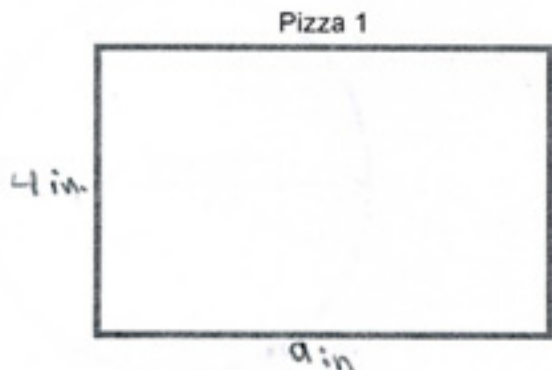
(a) What length of stuffed crust will be around the edge?

②  $\sqrt{36} = 6$  inches  
 ①  $4\sqrt{36}$   
~~26~~ inches

(b) Design two rectangular pizzas, each with an area of 36 square inches, with different perimeters, so that Robbie will have more crust than on the square pizza. In each case calculate what the perimeter will be.

Piz.1

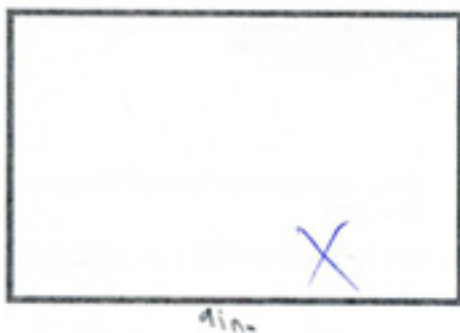
$\frac{4 \times 9}{26}$



Perimeter of Pizza 1 26 inches

✓

Pizza 2



Perimeter of Pizza 2 26 inches

✗

Piz.2

$\frac{4 \times 9}{26}$

3. What is the circumference of a round pizza with an area of 36 square inches?

9 inches

Explain how you figured this out.

I divided 36 by 4 and got 9.

9/5/08

page 1

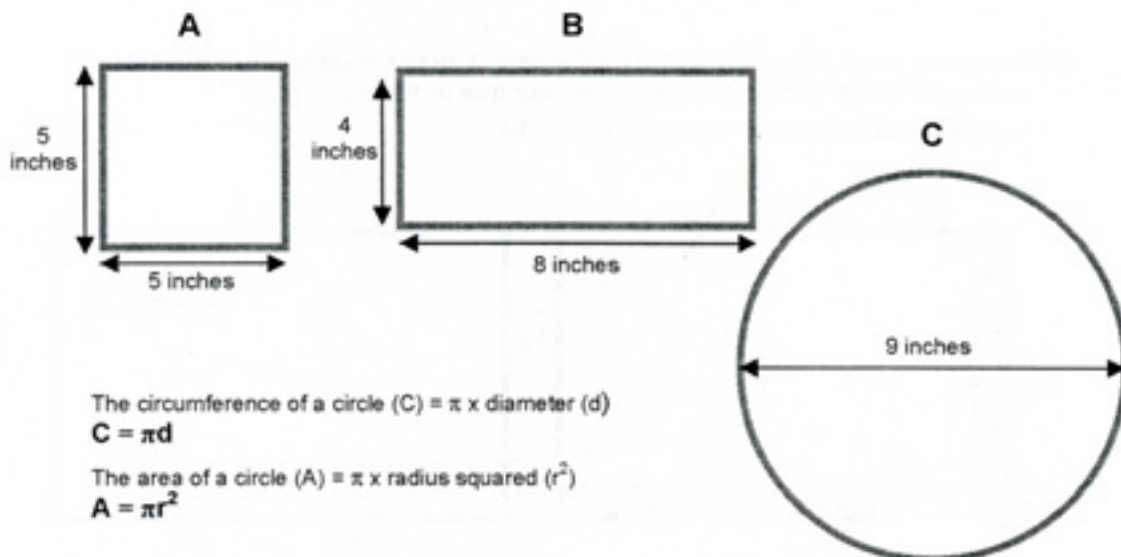
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Robbie loves the stuffed crusts on pizzas.

Here are some stuffed crust pizza shapes that are baked.



1. How many inches of stuffed crust are put around the edge of each of these pizzas?

A 20 ✓ inches

B 24 ✓ inches

C 18 inches

Show your calculations.

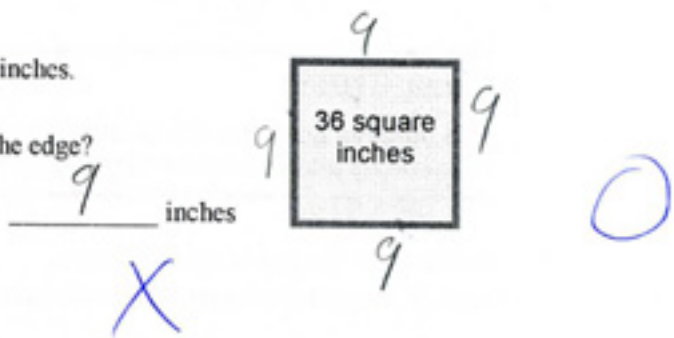
X

X

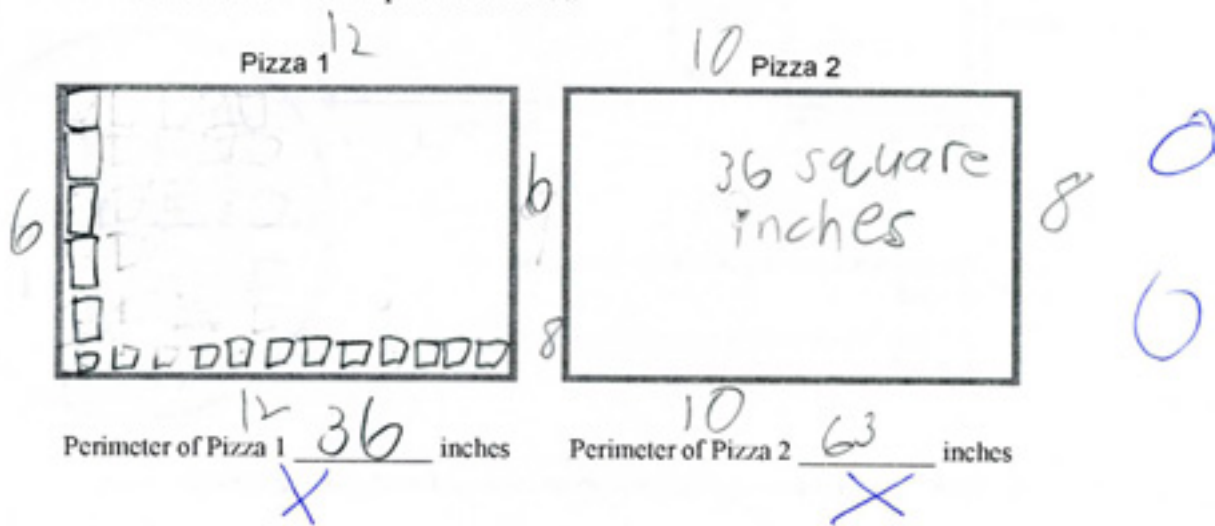


2. Here is a square pizza with an area of 36 square inches.

(a) What length of stuffed crust will be around the edge?



(b) Design two rectangular pizzas, each with an area of 36 square inches, with different perimeters, so that Robbie will have more crust than on the square pizza. In each case calculate what the perimeter will be.



3. What is the circumference of a round pizza with an area of 36 square inches?

$\underline{72}$  inches

Explain how you figured this out.

I just drew little squares in the rectangle and counted them.

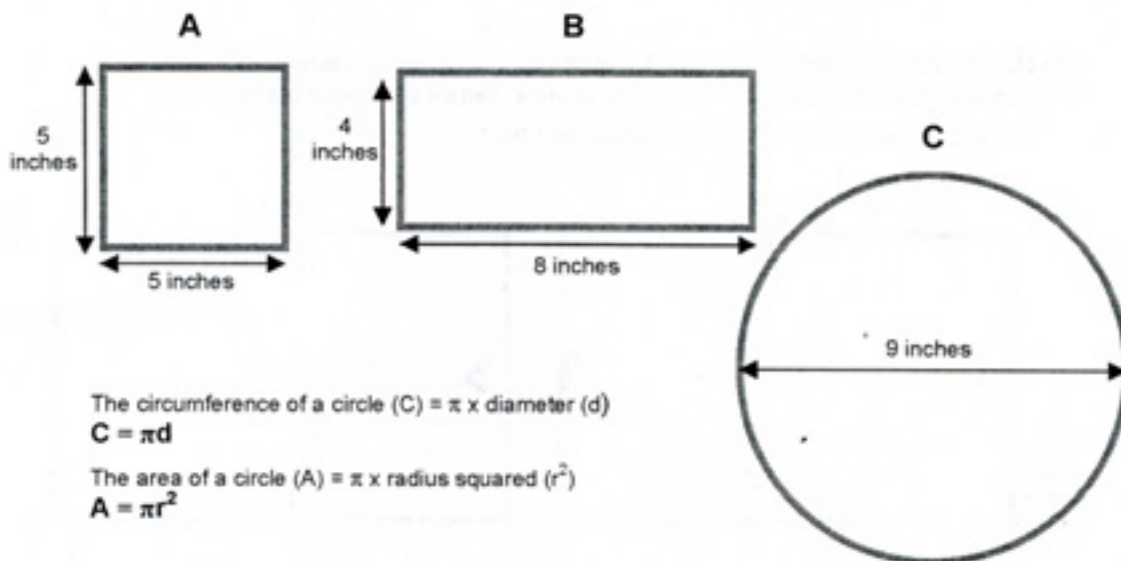
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$$C = \pi d$$

The area of a circle (A) =  $\pi \times$  radius squared ( $r^2$ )

$$A = \pi r^2$$

1. How many inches of stuffed crust are put around the edge of each of these pizzas?

A 25 inches      B 32 inches      C 28.26 inches

Show your calculations.

A.

$$5 \times 5 = 25 \text{ in.}$$

X

$$B. 8 \times 4 = 32 \text{ in.}$$

X

C.  $\pi = 3.14$        $d = 9$

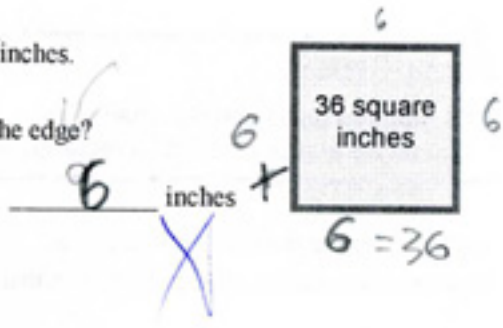
$$\begin{array}{r} 3.14 \\ \times 9 \\ \hline 28.26 \end{array} \text{ in.}$$

2

2. Here is a square pizza with an area of 36 square inches.

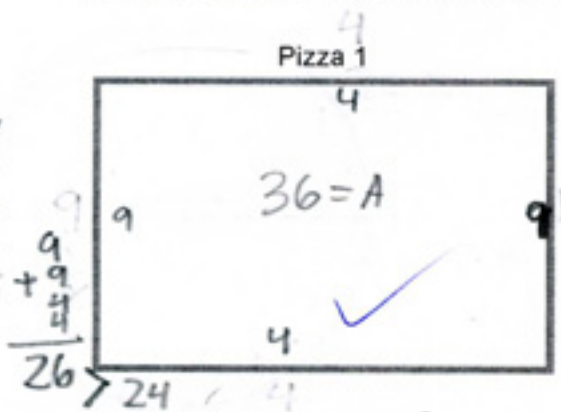
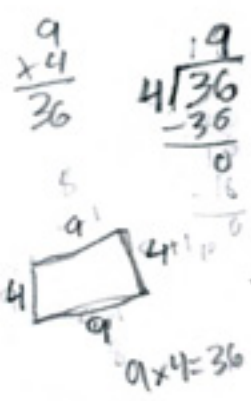
(a) What length of stuffed crust will be around the edge?

$$\begin{array}{r} 6 \\ 6 \overline{)36} \\ \underline{-36} \\ 0 \end{array}$$

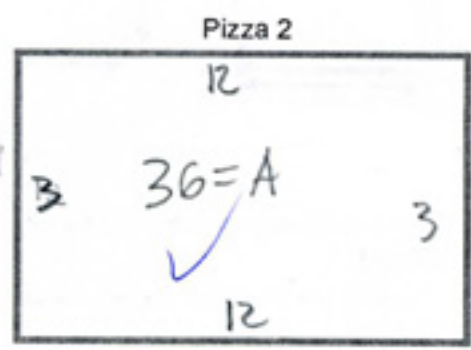


$$\begin{array}{r} 6 \\ 24 \overline{)36} \\ \underline{-24} \\ 12 \\ \underline{-12} \\ 0 \end{array}$$

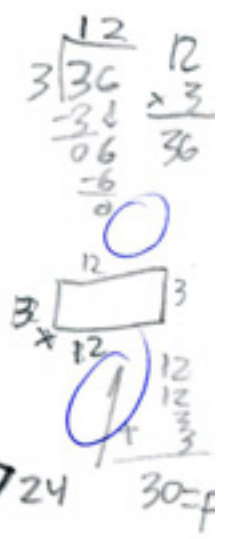
(b) Design two rectangular pizzas, each with an area of 36 square inches, with different perimeters, so that Robbie will have more crust than on the square pizza. In each case calculate what the perimeter will be.



Perimeter of Pizza 1  $\frac{26}{48}$  inches



Perimeter of Pizza 2  $\frac{30}{30}$  inches



3. What is the circumference of a round pizza with an area of 36 square inches?

\_\_\_\_\_ inches

Explain how you figured this out.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



$$3.14 \overline{)36}$$

8

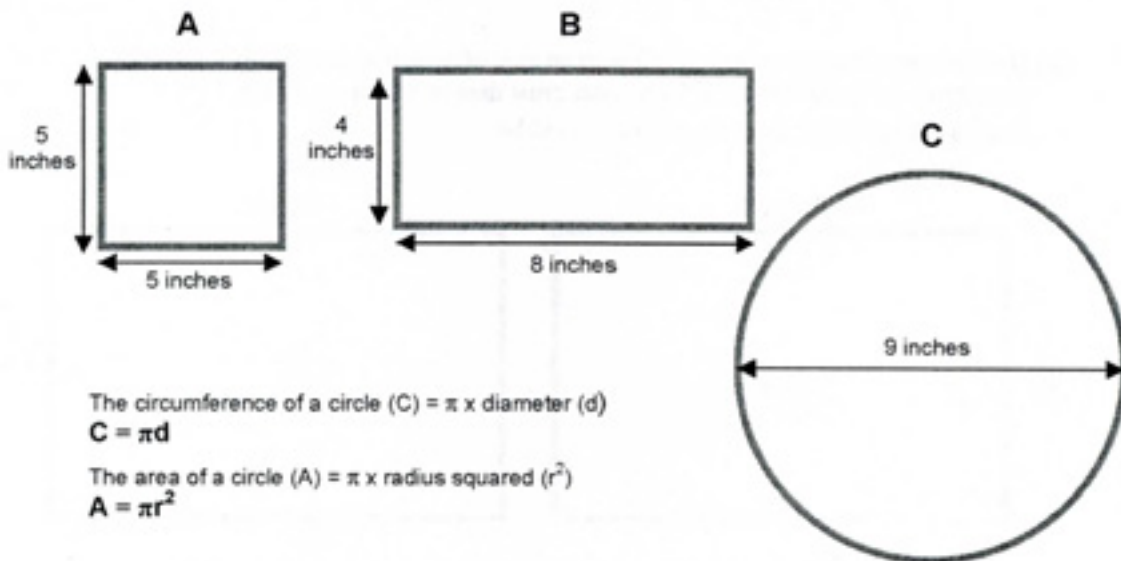
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$$C = \pi d$$

The area of a circle (A) =  $\pi \times \text{radius squared (r}^2\text{)}$

$$A = \pi r^2$$

1. How many inches of stuffed crust are put around the edge of each of these pizzas?

A 25 inches

B 24 inches

C 28.26 inches

Show your calculations.

$$\begin{array}{r} 5 \cdot 5 \\ \hline 25 \end{array}$$

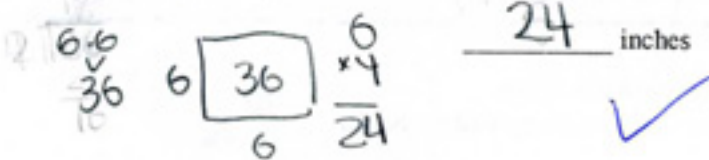
$$\begin{array}{r} 4 \cdot 2 + 8 \cdot 2 \\ \hline 8 + 16 \\ \hline 24 \end{array}$$

$$\begin{array}{r} 3.14 \\ \times 9 \\ \hline 28.26 \end{array}$$

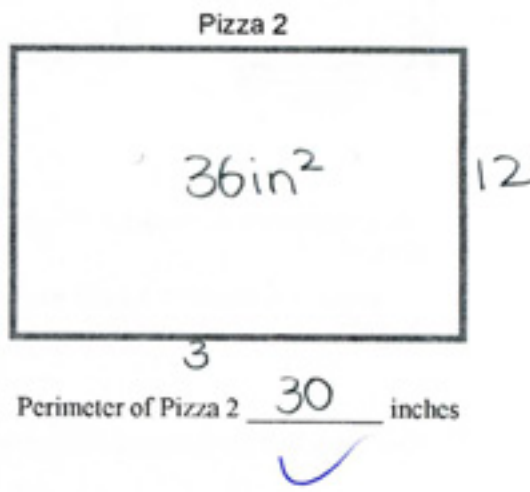
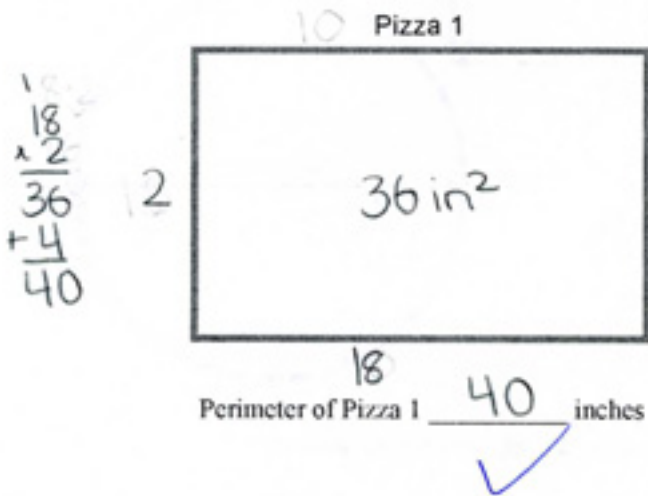
0  
1  
1

2. Here is a square pizza with an area of 36 square inches.

(a) What length of stuffed crust will be around the edge?



(b) Design two rectangular pizzas, each with an area of 36 square inches, with different perimeters, so that Robbie will have more crust than on the square pizza. In each case calculate what the perimeter will be.



3. What is the circumference of a round pizza with an area of 36 square inches?

71.592 inches

Explain how you figured this out.

Work below



$C = 2\pi r$   
 $C = 2 \times 3.14 \times 11.4$   
 $C = 71.592$

Handwritten calculations for the circumference:  
 $11.4 \times 2 = 22.8$   
 $22.8 \times 3.14 = 71.592$

Handwritten calculation:  
 $11 \times 11 = 121$

Handwritten calculation:  
 $6.6 \times 6.6 = 43.56$



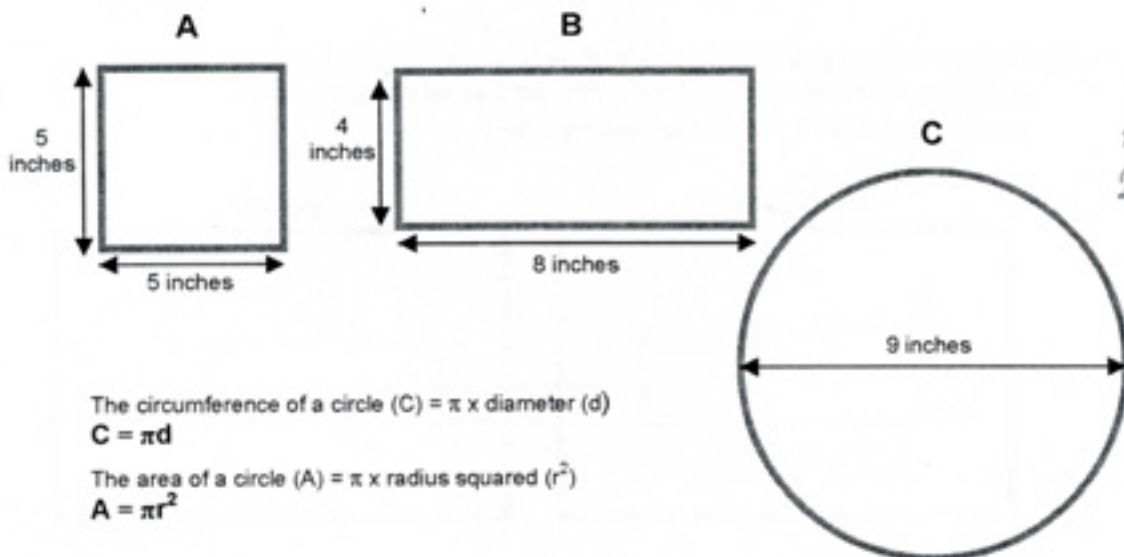
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Here are some stuffed crust pizza shapes that are baked.



~~3.14~~  
~~x 9~~  
28.26

The circumference of a circle (C) =  $\pi \times \text{diameter (d)}$

$$C = \pi d$$

The area of a circle (A) =  $\pi \times \text{radius squared (r}^2\text{)}$

$$A = \pi r^2$$

1. How many inches of stuffed crust are put around the edge of each of these pizzas?

A 20 inches ✓

B 24 inches ✓

C 28.26 inches ✓

Show your calculations.

$$\begin{array}{r} 3.14 \\ \times 9 \\ \hline 28.26 \end{array}$$

$$5 \times 5 = 25$$

$$(8 \times 2) + (4 \times 2)$$

$$\begin{array}{r} 16 \\ + 8 \\ \hline 24 \end{array}$$

$$(5 \times 2) + (5 \times 2)$$

$$\begin{array}{r} 10 \\ + 10 \\ \hline 20 \end{array}$$

2. Here is a square pizza with an area of 36 square inches.

(a) What length of stuffed crust will be around the edge?

$$\sqrt{36}$$

24 inches

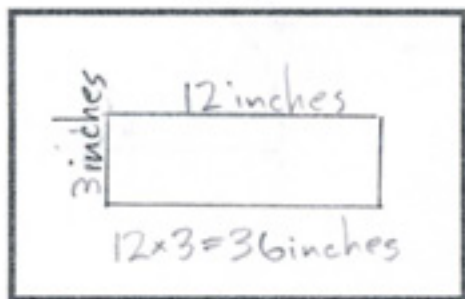


$$(6 \times 2) + (6 \times 2)$$

$$12 + 12 = 24$$

(b) Design two rectangular pizzas, each with an area of 36 square inches, with different perimeters, so that Robbie will have more crust than on the square pizza. In each case calculate what the perimeter will be.

Pizza 1

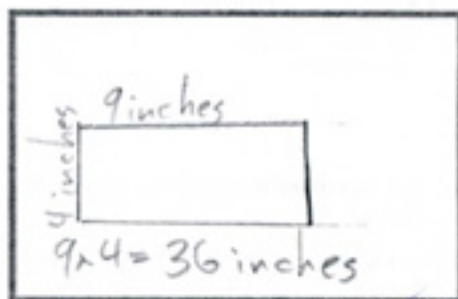


Perimeter of Pizza 1 30 inches

$$(12 \times 2) + (3 \times 2)$$

$$24 + 6 = 30$$

Pizza 2



Perimeter of Pizza 2 26 inches

$$(9 \times 2) + (4 \times 2)$$

$$18 + 8 = 26 \text{ inches}$$

3. What is the circumference of a round pizza with an area of 36 square inches?

$$11.46 \times 2 = 22.92$$

72 inches

Explain how you figured this out.

I divided 36 by pi then doubled the answer then I multiplied the product by pi then I rounded the product.

8

$$\begin{array}{r} 22.92 \\ \times 3.14 \\ \hline 9168 \\ 22920 \\ +687600 \\ \hline 71.9688 \end{array}$$

$$\begin{array}{r} 0011.46 \\ \times 3.14 \\ \hline 314 \\ 460 \\ -314 \\ \hline 1460 \\ 0256 \\ \hline 2040 \\ 1880 \\ \hline 156 \end{array}$$

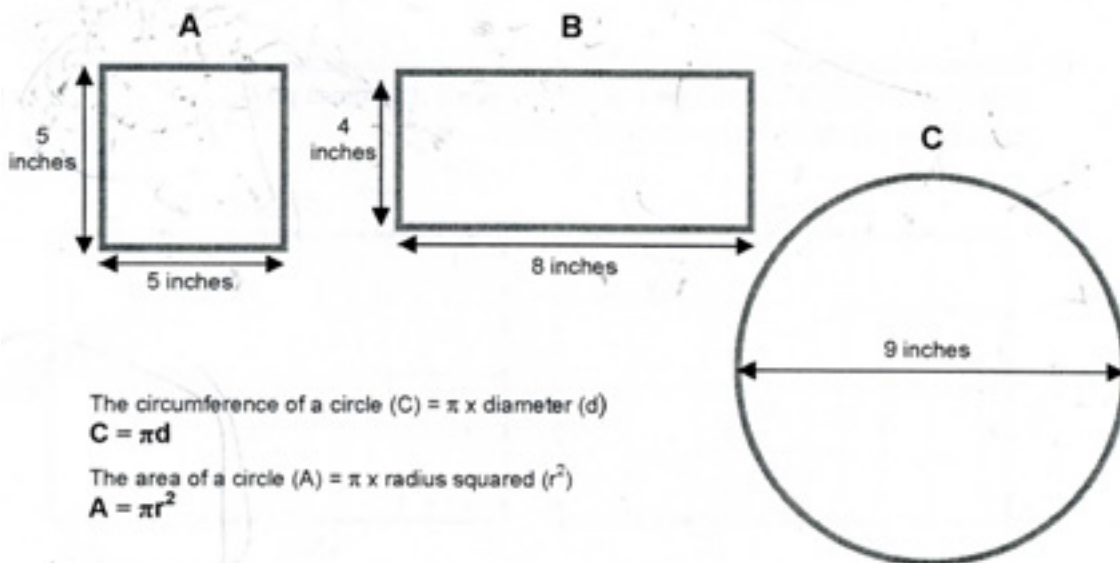
## Pizza Crusts

This problem gives you the chance to:

- find areas and perimeters of rectangular and circular shapes in a practical context

Robbie loves the stuffed crusts on pizzas.

Here are some stuffed crust pizza shapes that are baked.



The circumference of a circle (C) =  $\pi \times \text{diameter (d)}$

$$C = \pi d$$

The area of a circle (A) =  $\pi \times \text{radius squared (r}^2\text{)}$

$$A = \pi r^2$$

1. How many inches of stuffed crust are put around the edge of each of these pizzas?

A 20 inches

B 24 inches

C 29 inches

Show your calculations.

5-length  
5-width  
5  
+5 ✓  
20  
4  
x5  
20

8-length  
4-width  
+4 ✓  
24  
8    4  
x2    x2  
16    8

3.14 - pi  
x 9 radius  
28.26 ≈ 29 ✓

2. Here is a square pizza with an area of 36 square inches.

(a) What length of stuffed crust will be around the edge?

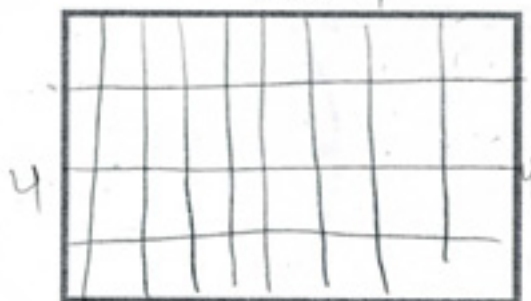
6 inches



(b) Design two rectangular pizzas, each with an area of 36 square inches, with different perimeters, so that Robbie will have more crust than on the square pizza.

In each case calculate what the perimeter will be.

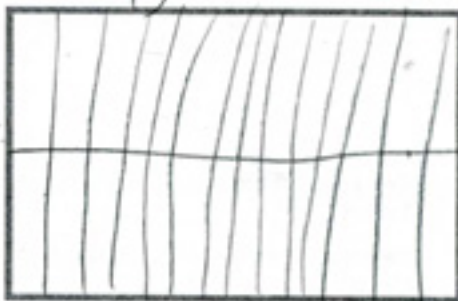
Pizza 1



Perimeter of Pizza 1 26 inches



Pizza 2

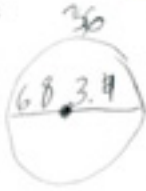


Perimeter of Pizza 2 30 inches



3. What is the circumference of a round pizza with an area of 36 square inches?

21.4 inches



Explain how you figured this out.

First, I divided 36 by 3.14 and got 11.5. Then I figured out the  $\sqrt{11.5}$  was 3.38  $\approx$  3.4. If you double 3.4, you get 6.8, which I multiplied by 3.14 to get 21.4.

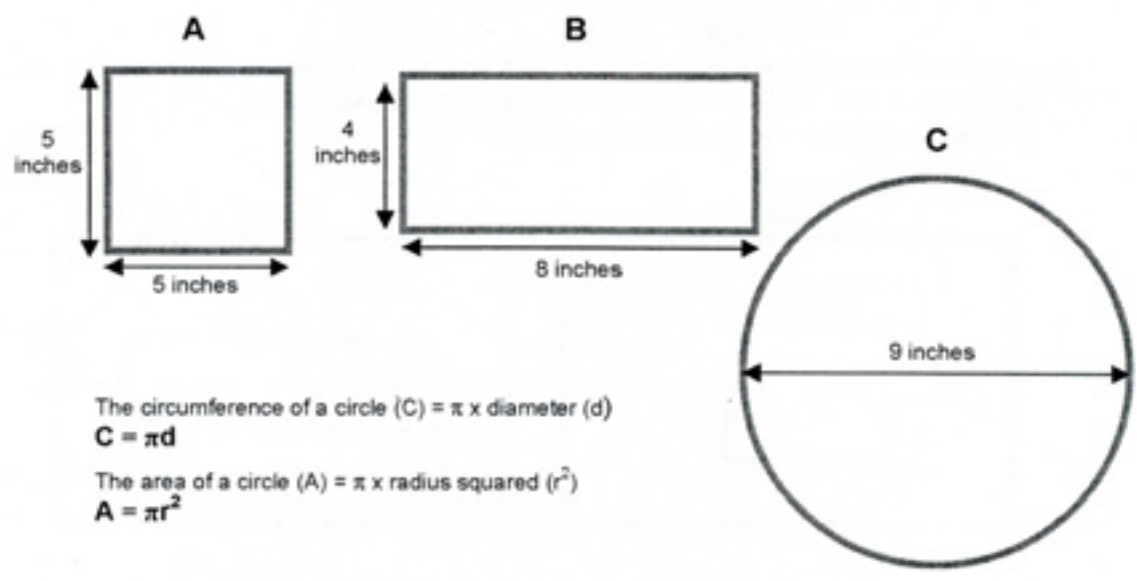
8

## Pizza Crusts

This problem gives you the chance to:

- find areas and perimeters of rectangular and circular shapes in a practical context

Robbie loves the stuffed crusts on pizzas.  
Here are some stuffed crust pizza shapes that are baked.



The circumference of a circle (C) =  $\pi \times \text{diameter (d)}$   
 $C = \pi d$   
 The area of a circle (A) =  $\pi \times \text{radius squared (r}^2\text{)}$   
 $A = \pi r^2$

1. How many inches of stuffed crust are put around the edge of each of these pizzas?

A 20 inches      B 24 inches      C 28.26 inches

Show your calculations.

A  

$$\begin{array}{r} 5 \\ 5 \\ 5 \\ 5 \\ \hline 20 \end{array}$$

B  
 $4 \times 8 = 32$   
 $8 \times 8 = 16$   

$$\begin{array}{r} 16 \\ 8 \\ \hline 24 \end{array}$$

C  

$$\begin{array}{r} 13 \\ 3.14 \\ \times 9 \\ \hline 28.26 \end{array}$$



2. Here is a square pizza with an area of 36 square inches.



(a) What length of stuffed crust will be around the edge?

9 inches

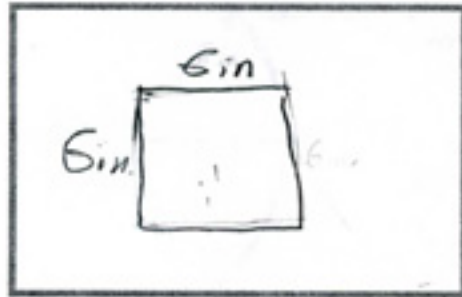
$$\begin{array}{r} 9 \\ 4 \overline{)36} \\ \underline{36} \\ 0 \end{array}$$

X

0

(b) Design two rectangular pizzas, each with an area of 36 square inches, with different perimeters, so that Robbie will have more crust than on the square pizza. In each case calculate what the perimeter will be.

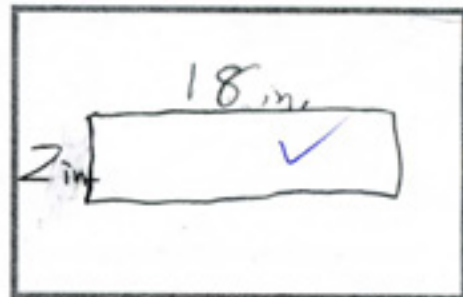
Pizza 1



Perimeter of Pizza 1 24 inches

X

Pizza 2



Perimeter of Pizza 2 40 inches

X ✓

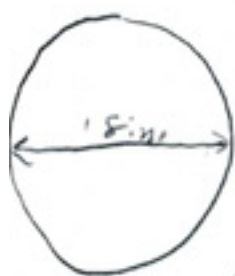
0  
0

A=36

3. What is the circumference of a round pizza with an area of 36 square inches?

56.52 inches

Explain how you figured this out.



First I divided 36 by 2 to find out the diameter which is 18. Then I multiplied 3.14 with 18. Lastly I got 56.52.

$$\begin{array}{r} 3.14 \\ \times 18 \\ \hline 56.52 \end{array}$$

8

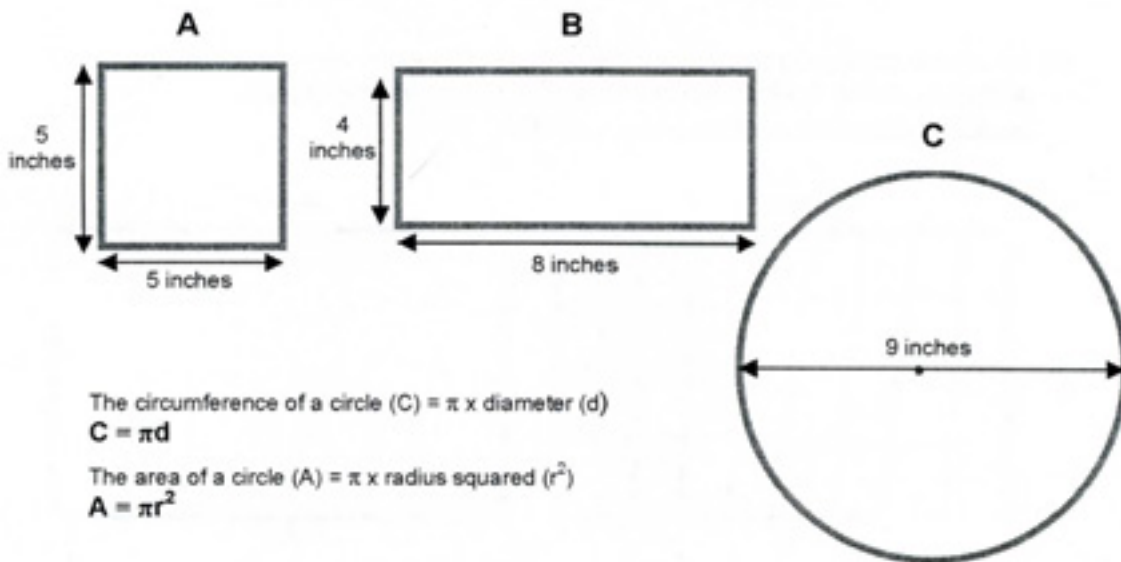
## Pizza Crusts

This problem gives you the chance to:

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Robbie loves the stuffed crusts on pizzas.

Here are some stuffed crust pizza shapes that are baked.



The circumference of a circle (C) =  $\pi \times$  diameter (d)

$$C = \pi d$$

The area of a circle (A) =  $\pi \times$  radius squared ( $r^2$ )

$$A = \pi r^2$$

1. How many inches of stuffed crust are put around the edge of each of these pizzas?

A 20 ✓ inches

B 24 ✓ inches

C 63 inches? |

Show your calculations.

A.)  $\begin{array}{r} 5 \\ \times 4 \\ \hline 20 \end{array}$  ✓

B.)  $\begin{array}{r} 4 \\ + 2 \\ \hline 8 \end{array}$

$\begin{array}{r} 8 \\ + 8 \\ \hline 16 \end{array}$

$\begin{array}{r} 16 \\ + 8 \\ \hline 24 \end{array}$  ✓

C.)

X

X

0

2. Here is a square pizza with an area of 36 square inches.

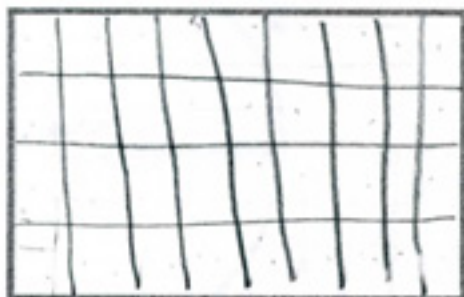
(a) What length of stuffed crust will be around the edge?

6 inches



(b) Design two rectangular pizzas, each with an area of 36 square inches, with different perimeters, so that Robbie will have more crust than on the square pizza. In each case calculate what the perimeter will be.

Pizza 1

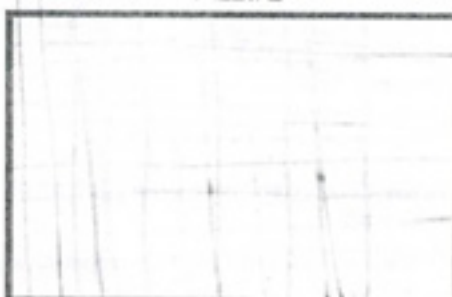


4

9

Perimeter of Pizza 1 26 inches

Pizza 2



Perimeter of Pizza 2 16 inches

3. What is the circumference of a round pizza with an area of 36 square inches?

X inches

Explain how you figured this out.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

$\pi \cdot 18$