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.

A

\[
\begin{array}{c}
\text{5 inches} \\
\text{5 inches}
\end{array}
\]

B

\[
\begin{array}{c}
\text{4 inches} \\
\text{8 inches}
\end{array}
\]

C

\[
\text{9 inches}
\]

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

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

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

A \[\frac{3.14}{5} \times 5 = 15.7\] inches

B \[\frac{3.14}{9} \times 4 = 12\] inches

C \[\frac{3.14}{9} \times 8 = 25.12\] 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?

\[
\frac{9}{4} \times 4 = 36 \\
\]

\[\text{\boxed{36}}\text{ inches}\]

(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

\[
\frac{a}{12} = \frac{9}{18} + \frac{12}{24} = \frac{11}{42} \\
\]

\[\text{Perimeter of Pizza 1 \boxed{42}}\text{ inches}\]

Pizza 2

\[
\frac{14}{36} \times 1 = \frac{36}{161} \\
\]

\[\text{Perimeter of Pizza 2 \boxed{42}}\text{ inches}\]

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

Explain how you figured this out.

\[
2\sqrt{36} = 6 \\
\frac{3.14}{18} = 18\text{ and multiplication to pie which is 3.14.} \\
\]

\[\text{\boxed{56.52}}\text{ inches}\]
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.

A
- 5 inches
- 5 inches

B
- 4 inches
- 8 inches

C
- 9 inches

The circumference of a circle (C) = π x diameter (d)
C = πd

The area of a circle (A) = π x radius squared (r²)
A = πr²

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.

\[ \frac{5}{20} \times \frac{2}{16} = \frac{1}{2} \times \frac{1}{8} = \frac{1}{16} \]
2. Here is a square pizza with an area of 36 square inches.

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

\[ \frac{9}{4 \sqrt{36}} \]

\[ \text{\_\_\_\_ inches} \]

(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

\[ a = 36 \text{ inches} \]

\[ \text{Perimeter of Pizza 1: \_\_\_\_ inches} \]

Pizza 2

\[ a = 36 \text{ inches} \]

\[ \text{Perimeter of Pizza 2: \_\_\_\_ inches} \]

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

\[ 57.06 \text{ inches} \]

Explain how you figured this out.

I multiplied 3.14 by 36 and got 113.04. Then I divided 113.04 by 2 and got 57.06.
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.

A

5 inches

5 inches

B

4 inches

8 inches

C

9 inches

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

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

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

A \( \text{20 inches} \)  
B \( \text{24 inches} \)  
C \( \text{16 inches} \)

Show your calculations.

A: \( \text{5} \times \text{5} = \text{25} \)
B: \( \text{8} + \text{6} = \text{24} \)
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.

Perimeter of Pizza 1: 26 inches
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 X height of the circle 13 and the width 12 add them together and got 36 again.
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.

A

5 inches

5 inches

B

4 inches

8 inches

C

9 inches

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)}
A = \pi r^2

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

A \_20.1\_ inches   B \_24\_ inches   C \_28.26\_ inches

Show your calculations.

\[
\frac{5 \times 4}{2 \times d}
\]

\[
\frac{8}{x} \times 2 \times \frac{8}{16}
\]

\[
\frac{3.14 \times \frac{9}{2}}{28.26}
\]
2. Here is a square pizza with an area of 36 square inches.

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

\[ \text{9 inches} \]

(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: 14 inches

Pizza 2:

- Perimeter: 30 inches

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

Explain how you figured this out.

\[ r = 6 \]

\[ C = 2\pi r = 3.14 \times 6 = 18.84 \text{ inches} \]
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.

\[ (2 \times 4) + (2 \times 8) = \frac{5}{4} + \frac{16}{12} = 24 \]

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

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

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

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

\[
\frac{4 \sqrt{36}}{36} = \frac{4 \cdot 6}{36} = \frac{24}{36} = \frac{2}{3}
\]

\[
\text{36 square inches}
\]

\[
\text{inches}
\]

(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.

\[
\begin{align*}
\text{Pizza 1: } & \quad 12 \text{ in} \\
\text{Perimeter of Pizza 1: } & \quad 30 \text{ inches}
\end{align*}
\]

\[
\begin{align*}
\text{Pizza 2: } & \quad 9 \text{ in} \\
\text{Perimeter of Pizza 2: } & \quad 26 \text{ inches}
\end{align*}
\]

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

Explain how you figured this out.

\[
\text{Divide 36 by 2 and then multiply after rounding to the nearest tenth.}
\]

\[
\frac{36}{2} \times 3.14 = 56.52
\]
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.

![Pizza Crust Diagram]

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

$C = \pi d$

The area of a circle (A) = $\pi$ x 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 $\underline{20\ \text{inches}}$  B $\underline{24\ \text{inches}}$  C $\underline{9\ \text{inches}}$

Show your calculations.

\[
\begin{align*}
4 + 4 &= 8 \\
8 + 8 &= 16 \\
16 + 16 &= 32 \\
32 + 32 &= 64
\end{align*}
\]
2. Here is a square pizza with an area of 36 square inches.

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

\[
\frac{\sqrt{36}}{2} \quad \text{inches}
\]

(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 and Pizza 2 diagrams]

Perimeter of Pizza 1 26 inches
Perimeter of Pizza 2 26 inches

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

\[9 \text{ inches}\]

Explain how you figured this out.

I divided 36 by 4 and got 9.
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)}
A = \pi r^2

1. How many inches of stuffed crust are put around the edge of each of these pizzas?
   
   A \text{ 20 inches} \quad B \text{ 24 inches} \quad C \text{ 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?

____ 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: 36 inches

Pizza 2

Perimeter of Pizza 2: 63 inches

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

Explain how you figured this out.

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

____ inches
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.

A

5 inches

5 inches

B

4 inches

8 inches

C

9 inches

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

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

A 25 \( \times \) inches  B 32 \( \times \) inches  C 28.26 inches

Show your calculations.

A. \[ 5 \times 5 = 25 \text{ in.} \]
B. \[ 8 \times 4 = 32 \text{ in.} \]
C. \[ \pi = 3.14 \quad d = 9 \]
\[ \frac{3}{3} \times 9 = 28.26 \text{ in.} \]
2. Here is a square pizza with an area of 36 square inches.

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

\[
\frac{6}{36} = \frac{6}{36} = 1 \text{ inches}
\]

(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 diagrams]

Perimeter of Pizza 1: \(26\) inches

Perimeter of Pizza 2: \(30\) inches

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

Explain how you figured this out.
**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.

![Pizza Crusts Diagram]

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

\[ C = \pi d \]

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

\[ A = \pi r^2 \]

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.

- **A**
  \[
  \frac{5 \times 5}{25} \times \frac{8 + 16}{24}
  \]

- **B**
  \[
  \frac{4.2 + 8.2}{8 + 16}
  \]

- **C**
  \[
  \frac{3.14}{9} \times \frac{28.26}{28.26}
  \]
2. Here is a square pizza with an area of 36 square inches.

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

\[
\frac{6 \times 6}{36} = \frac{36}{6} = \frac{6}{2} = 3 \text{ inches}
\]

(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

- Area: 36 in²
- Perimeter: 18 + 2 + 18 + 2 = 40 inches

Pizza 2

- Area: 36 in²
- Perimeter: 12 + 2 + 12 + 2 = 30 inches

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

\[\frac{71.592}{\infty}\]

Explain how you figured this out.

Work below:

\[
\begin{align*}
\pi &\approx 3.14 \\
11.4 &\times 3.14 = 35.482 \\
\end{align*}
\]
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 20 inches
   - B 24 inches
   - C 28.26 inches

Show your calculations.

\[
\begin{align*}
A &= 3.14 \times 9 = 28.26 \\
B &= (8 \times 2) + (4 \times 2) = 16 + 8 = 24 \\
C &= (5 \times 2) + (5 \times 2) = 10 + 10 = 20
\end{align*}
\]
2. Here is a square pizza with an area of 36 square inches.

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

   \[ \sqrt{36} = 6 \]

   

   \[ (6 \times 2) + (6 \times 2) = 24 \text{ inches} \]

   

   (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**

   - 3 inches
   - 12 inches

   Perimeter of Pizza 1: 30 inches

   

   \[ (12 \times 2) + (3 \times 2) = 24 + 6 = 30 \]

   

   **Pizza 2**

   - 9 inches
   - 4 inches

   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?

   

   \[ 11.4 \times 2 = 22.82 \text{ inches} \]

   

   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.
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.

A
5 inches
5 inches

B
4 inches
8 inches

C
9 inches

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

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.
\[
\begin{align*}
A & = 20 \\
B & = \frac{8 \times 4}{2} \times 2 \\
C & = \frac{3\pi \times 9}{2} \\
& = \frac{28.26}{2.29}
\end{align*}
\]
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 16 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?

   Explain how you figured this out.

   First I divided 36 by 3.14 and got 11.5. Then I figured out the \( \pi \) 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.
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.

A

\[ \text{5 inches} \]
\[ \text{5 inches} \]

B

\[ \text{4 inches} \]
\[ \text{8 inches} \]

C

\[ \text{9 inches} \]

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

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

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.

\[ \frac{1}{3} \]
\[ \frac{\pi}{3.14} \]
\[ \frac{9}{28.26} \]
2. Here is a square pizza with an area of 36 square inches.

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

\[ \frac{9}{4 \sqrt{36}} = \frac{9}{36} \]

(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.

<table>
<thead>
<tr>
<th>Pizza 1</th>
<th>Pizza 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Pizza 1 diagram]</td>
<td>![Pizza 2 diagram]</td>
</tr>
<tr>
<td>Perimeter of Pizza 1 20 inches</td>
<td>Perimeter of Pizza 2 40 inches</td>
</tr>
</tbody>
</table>

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

\[ A = 36 \]

Explain how you figured this out.

First I divided 36 by 2 to find out the diameter which is 7.8. Then I multiplied 3.14 with 18. Lastly I got 56.52.
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.

A

B

C

5 inches

4 inches

8 inches

9 inches

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)}
A = \pi r^2

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

A 20 \text{ inches}  
B 24 \text{ inches}  
C 63 \text{ inches?}

Show your calculations.
A_1.) \frac{5}{20}  
B_1.) \frac{4}{8}  
C_1.) \frac{16}{24}  

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

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

\[ \underline{6}\quad \text{inches} \]

(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: \[ \underline{26}\quad \text{inches} \]

Pizza 2

Perimeter of Pizza 2: \[ \underline{18}\quad \text{inches} \]

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

\[ \underline{\pi \cdot 18}\quad \text{inches} \]

Explain how you figured this out.

_________________________________________

_________________________________________

_________________________________________