

Practice Worksheet on Perimeter and Area

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Subject: Mathematics

Date: 1/14/2025

Long Answer Questions

1. Question 1: Find the mistake in calculating the perimeter of the rectangle where the length is 9cm 6mm and the width is three times smaller. The provided calculation is: $P = 2 * 9\text{cm } 6\text{mm} + 2 * 2\text{cm } 2\text{mm} = 19\text{cm } 2\text{mm} + 4\text{cm } 4\text{mm} = 23\text{cm } 6\text{mm}$. Explain the mistake and calculate the correct perimeter.
2. Question 2: Find the mistake in the calculation of the perimeter of a square with a side equal to one-fifth of 45cm. The provided calculation is: $a = 45 * 5 = 225\text{cm}$, $P = 4 * 225\text{cm} = 900\text{cm}^2$. Explain the mistake and calculate the correct perimeter.
3. Question 3: A rectangular garden has a length of 5m and a width of 50cm. Calculate the perimeter of the garden using centimeters. What is wrong with the solution: $5\text{m} + 50\text{cm} = 550\text{cm}$?
4. Question 4: What is the perimeter of a rectangle with sides 15cm and 10cm? Correct the mistake: $15\text{cm} + 10\text{cm} = 25\text{cm}$.
5. Question 5: A rectangular field is 20 meters long and 10 meters wide. What is the area of the field? Explain the mistake in the solution: $20\text{m} + 10\text{m} = 30\text{m}^2$

6. Question 6: A rectangle has a length of 12 meters and a width of 10 meters. Find the perimeter of the rectangle if the length is twice the given length. Explain the mistake in the solution $12\text{m} + 12\text{m} + 10\text{m} = 34\text{m}$

7. Question 7: A square has sides of 7cm. Calculate the perimeter. Explain the error in the solution: $7\text{cm} \times 7\text{cm} = 49\text{cm}^2$.

8. Question 8: A rectangle has a length of 5m and a width of 50cm. Calculate its perimeter. Correct the mistake in the calculation: $5\text{m} + 50\text{cm} = 550\text{cm}$.

Multiple Choice Questions

1. What is the correct perimeter of a rectangle with a length of 9cm 6mm and a width three times smaller?

- a) 23cm 6mm
- b) 25cm 4mm
- c) 22cm 2mm
- d) 24cm 8mm

2. What is the perimeter of a square whose side is one-fifth of 45cm?

- a) 900cm
- b) 225cm
- c) 36cm
- d) 45cm

3. A rectangle is 5m long and 50cm wide. What is its perimeter in centimeters?

- a) 55cm
- b) 1100cm
- c) 550cm

d) 600cm

4. What is the perimeter of a rectangle with sides of 15cm and 10cm?

a) 25cm

b) 50cm

c) 75cm

d) 100cm

5. A rectangular field is 20 meters long and 10 meters wide. What is its area?

a) 30m

b) 200m²

c) 30m²

d) 100m

6. A rectangle has a length of 12 meters and a width of 10 meters. What is its perimeter if the length is doubled?

a) 32m

b) 34m

c) 22m

d) 44m

7. A square has sides of 7cm. What is its perimeter?

a) 49cm

b) 49cm²

c) 28cm

d) 14cm

8. A rectangle is 5m long and 50cm wide. What is its perimeter in centimeters?

a) 550cm

b) 1100cm

c) 55m

d) 11m

Answer Key

Long Answer Questions - Expected Responses

1. Question 1: Find the mistake in calculating the perimeter of the rectangle where the length is 9cm 6mm and the width is three times smaller. The provided calculation is: $P = 2 * 9\text{cm } 6\text{mm} + 2 * 2\text{cm } 2\text{mm} = 19\text{cm } 2\text{mm} + 4\text{cm } 4\text{mm} = 23\text{cm } 6\text{mm}$. Explain the mistake and calculate the correct perimeter.

Expected Answer: The mistake is in calculating the width. The width should be $9\text{cm } 6\text{mm} / 3 = 3\text{cm } 2\text{mm}$. The correct perimeter is $2 * (9\text{cm } 6\text{mm}) + 2 * (3\text{cm } 2\text{mm}) = 25\text{cm } 4\text{mm}$.

2. Question 2: Find the mistake in the calculation of the perimeter of a square with a side equal to one-fifth of 45cm. The provided calculation is: $a = 45 * 5 = 225\text{cm}$, $P = 4 * 225\text{cm} = 900\text{cm}^2$. Explain the mistake and calculate the correct perimeter.

Expected Answer: The mistake is in calculating the area instead of perimeter. The correct calculation is $4 * 9\text{cm} = 36\text{cm}$. The area of a square is indeed 81cm^2 ($9\text{cm} * 9\text{cm}$), but the question asked for the perimeter.

3. Question 3: A rectangular garden has a length of 5m and a width of 50cm. Calculate the perimeter of the garden using centimeters. What is wrong with the solution: $5\text{m} + 50\text{cm} = 550\text{cm}$?

Expected Answer: The mistake is in the unit conversion. $100\text{cm} = 1\text{m}$, not $10\text{cm} = 1\text{m}$. $5\text{m} + 50\text{cm}$ should be converted to 550cm .

4. Question 4: What is the perimeter of a rectangle with sides 15cm and 10cm? Correct the mistake: $15\text{cm} + 10\text{cm} = 25\text{cm}$.

Expected Answer: The perimeter is $2(\text{length} + \text{width}) = 2(15\text{cm} + 10\text{cm}) = 50\text{cm}$. The mistake was only adding the sides, not multiplying by two.

5. Question 5: A rectangular field is 20 meters long and 10 meters wide. What is the area of the field? Explain the mistake in the solution: $20\text{m} + 10\text{m} = 30\text{m}^2$

Expected Answer: To find the area you must multiply length by width. The solution mistakenly adds length and width.

6. Question 6: A rectangle has a length of 12 meters and a width of 10 meters. Find the perimeter of the rectangle if the length is twice the given length. Explain the mistake in the solution $12\text{m} + 12\text{m} + 10\text{m} = 34\text{m}$

Expected Answer: The mistake lies in interpreting 'twice the length'. It means to multiply by 2, not add to the length. The correct calculation should be $2 \times 12\text{m} + 10\text{m} = 34\text{m}$.

7. Question 7: A square has sides of 7cm. Calculate the perimeter. Explain the error in the solution: $7\text{cm} \times 7\text{cm} = 49\text{cm}^2$.

Expected Answer: The mistake is using the area formula instead of the perimeter formula. The perimeter of a square is 4 times the length of a side.

8. Question 8: A rectangle has a length of 5m and a width of 50cm. Calculate its perimeter. Correct the mistake in the calculation: $5\text{m} + 50\text{cm} = 550\text{cm}$.

Expected Answer: The mistake is in the unit conversion and the addition. First convert everything to centimeters ($5\text{m} = 500\text{cm}$, 50cm). Then add the sides together to find the perimeter and multiply by 2. $2 \times (500\text{cm} + 50\text{cm}) = 1100\text{cm}$

Multiple Choice Questions - Correct Answers

1. What is the correct perimeter of a rectangle with a length of 9cm 6mm and a width three times smaller?

Correct Answer: 25cm 4mm

2. What is the perimeter of a square whose side is one-fifth of 45cm?

Correct Answer: 36cm

3. A rectangle is 5m long and 50cm wide. What is its perimeter in centimeters?

Correct Answer: 1100cm

4. What is the perimeter of a rectangle with sides of 15cm and 10cm?

Correct Answer: 50cm

5. A rectangular field is 20 meters long and 10 meters wide. What is its area?

Correct Answer: 200m²

6. A rectangle has a length of 12 meters and a width of 10 meters. What is its perimeter if the length is doubled?

Correct Answer: 34m

7. A square has sides of 7cm. What is its perimeter?

Correct Answer: 28cm

8. A rectangle is 5m long and 50cm wide. What is its perimeter in centimeters?

Correct Answer: 1100cm