

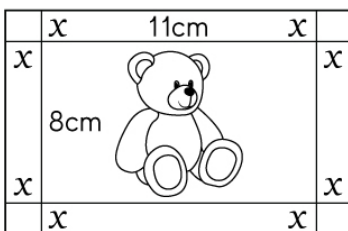
Quadratic Area Word Problems

- ① A plot of land for sale has a width of x feet, and a length that is 8 feet less than its width. A farmer will only purchase the land if it measures 240 square feet. What value of x will allow the farmer to purchase the land?
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- ② The area of a rectangular field is 2000 sq.cm and its perimeter is 180 cm. Find the length and width of the field.
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- ③ A rectangle whose area is 192 square feet has a width that is 4 feet less than the length. Find the dimensions of the rectangle.
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- ④ A photograph $8\text{cm} \times 11\text{cm}$ will be framed as shown in the diagram. The total area of the frame and photograph is 180 cm^2 . Find the width of the frame, marked x .



Quadratic Area Word Problems

Answers

- ① A plot of land for sale has a width of x feet, and a length that is 8 feet less than its width. A farmer will only purchase the land if it measures 240 square feet. What value of x will allow the farmer to purchase the land?

20 feet

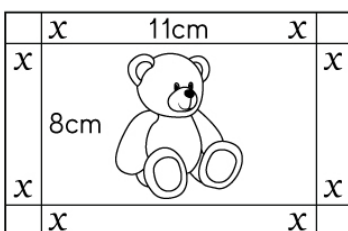
- ② The area of a rectangular field is 2000 sq.cm and its perimeter is 180 cm. Find the length and width of the field.

Length = 40 m, width = 50 m

- ③ A rectangle whose area is 192 square feet has a width that is 4 feet less than the length. Find the dimensions of the rectangle.

Length = 16 feet, width = 12 feet

- ④ A photograph $8\text{cm} \times 11\text{cm}$ will be framed as shown in the diagram. The total area of the frame and photograph is 180 cm^2 . Find the width of the frame, marked x .



2 cm