

Worked Solutions

Mathematics

Questions and short answers



► Starter 1

Worked solutions



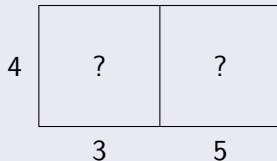
► Starter 1

Starter 1

1) Arithmetic

$$13 + 9 = \underline{\quad}$$

2) Box Method



Find the total area.

3) Collect like terms

$$3b + 4 + 2b = \underline{\quad}$$

4) Expand the bracket

$$2(x + 6) = \underline{\quad}$$

Starter 1

1) Arithmetic

$$13 + 9 = 22$$

2) Box Method



Find the total area. Total area = 32

3) Collect like terms

$$3b + 4 + 2b = 5b + 4$$

4) Expand the bracket

$$2(x + 6) = 2x + 12$$

Worked Solution: Starter 1, Question 1

Question: Calculate $13 + 9$.

Worked Solution: Starter 1, Question 1

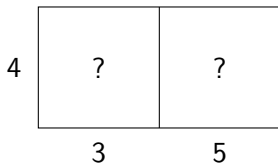
Question: Calculate $13 + 9$.

Worked Solution: Use $13 = 10 + 3$, so

$$13 + 9 = 10 + (3 + 9) = 10 + 12 = 22.$$

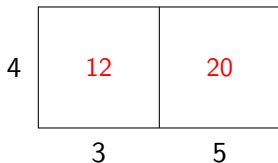
Worked Solution: Starter 1, Question 2

Question: Use the box method to find the total area of the rectangle below.



Worked Solution: Starter 1, Question 2

Question: Use the box method to find the total area of the rectangle below.



Worked Solution: The two rectangles have areas 3×4 and 5×4 .
Therefore

$$3 \times 4 + 5 \times 4 = 12 + 20 = 32.$$

Worked Solution: Starter 1, Question 3

Question: Collect like terms: $3b + 4 + 2b$.

Worked Solution: Starter 1, Question 3

Question: Collect like terms: $3b + 4 + 2b$.

Worked Solution: Collect the b terms and keep the constant separate:

$$3b + 4 + 2b = (3b + 2b) + 4 = 5b + 4.$$

Worked Solution: Starter 1, Question 4

Question: Expand the bracket: $2(x + 6)$.

Worked Solution: Starter 1, Question 4

Question: Expand the bracket: $2(x + 6)$.

Worked Solution: Using the distributive property $a(b + c) = ab + ac$,

$$2(x + 6) = 2 \cdot x + 2 \cdot 6 = 2x + 12.$$