Homework/Extension
Step 8: Scaling

National Curriculum Objectives:

Mathematics Year 3: (3C6) Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
Mathematics Year 3: (3C8) Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which *n* objects are connected to *m* objects

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)
Developing Find the calculation that cannot be solved using the bar model shown. Using bar models with pictorials for support.
Expected Find the calculation that cannot be solved using the bar model shown. Using bar models for support.
Greater Depth Create the odd one out. No use of bar models or pictorials to support the question.

Questions 2, 5 and 8 (Varied Fluency)
Developing Identify whether the statement is correct. Using bar models with pictorials for support.
Expected Identify whether the statement is correct. Using bar models for support.
Greater Depth Identify whether the statement is correct. No use of bar models or pictorials to support the question.

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Identify the correct statement and explain your answer. Using bar models with pictorials for support.
Expected Identify the correct statement and explain your answer. Using bar models for support.
Greater Depth Identify the correct statement and explain your answer. Children draw their own representations to support their answer.

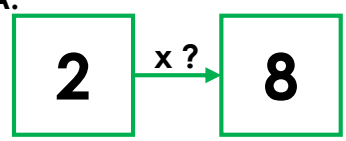
More Year 3 Multiplication and Division resources.

Did you like this resource? Don't forget to review it on our website.

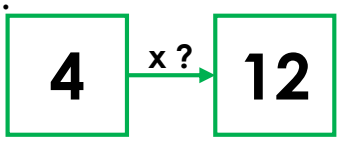
Scaling

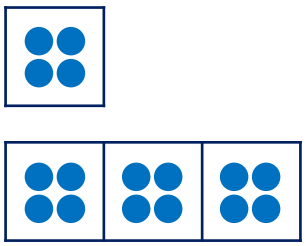
1. Which of these calculations cannot be solved using the bar model below?

A.



B.

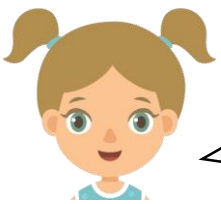




D

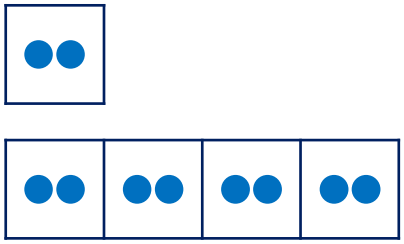
VF
HW/Ext

2. Susan is learning about scaling numbers.



Susan

I think 10 is 4 times as many as 2.



Is Susan correct?

D

VF
HW/Ext

3. Abby and Luca are discussing the bar model below.

Abby

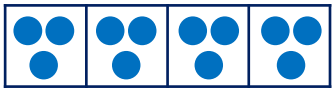
This bar model shows that there are twice as many children in the park than dogs.

This bar model shows that there are 4 times as many children in the park than dogs.

Luca

Dogs

Children



Who is correct? Explain your reasoning.

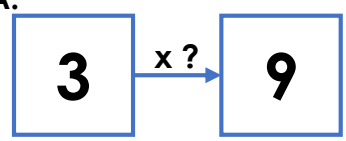
D

RPS
HW/Ext

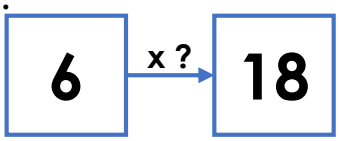
Scaling

4. Which of these calculations cannot be solved using the bar model below?

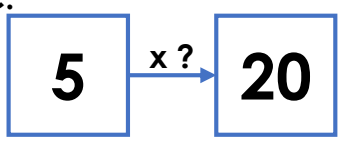
A.

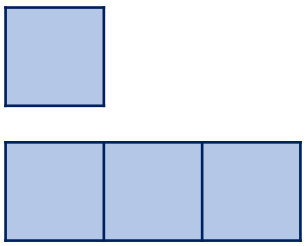


B.



C.





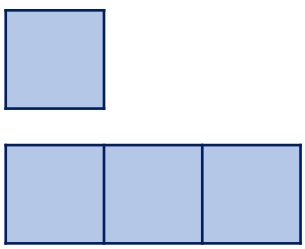
E

VF
HW/Ext

5. Greg is learning about scaling numbers.

Greg

I think 15 is 3 times as many as 5.



Is Greg correct?

E

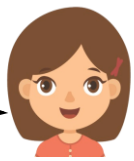
VF
HW/Ext

6. Mark and Carol are discussing the bar model below.

Mark

This bar model shows there are 6 oranges and 3 times as many apples, which is 12.

This bar model shows that there are 6 oranges and 5 times as many apples, which is 30.



Carol

Oranges 

Apples 

Who is correct? Explain your reasoning.

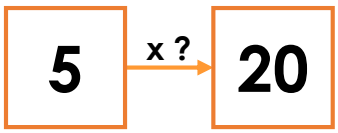
E

RPS
HW/Ext

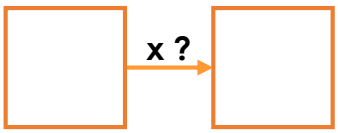
Scaling

7. Complete the number sentences so B is the odd one out.

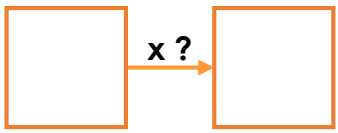
A.



B.



C.



GD

VF
HW/Ext

8. Peter is thinking about how to scale numbers.

Peter

I think that if a number is being scaled by 4, you always multiply the number by 4.

Is Peter correct? Give 3 examples.

GD

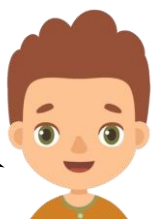
VF
HW/Ext

9. Doug and Carter are both discussing the number 48.

Doug

96 is 12 times as many as 8.

96 is 9 times as many as 8.



Carter

Who is correct? Draw bar models to prove your answer.

GD

RPS
HW/Ext

Homework/Extension
Scaling

Developing

1. A
2. Susan is incorrect. 8 is 4 times as many as 2 because 4 x 2 = 8.
3. Luca is correct because the 'children' bar model shows 4 sections which represents 4 times as many therefore there are 12 children as 3 x 4 = 12

Expected

4. C
5. Greg is correct.
6. Carol is correct because the 'apples' bar model shows 5 sections which represents 5 times as many therefore there are 30 apples as 6 x 5 = 30.

Greater Depth

7. Various answers, for example: B = 4 and 12 (x3); C = 6 and 24 (x4)
8. Peter is correct. Various answers, for example: 4 and 16 (4 x 4); 5 and 20 (5 x 4); 8 and 32 (8 x 4).
9. Doug is correct because 8 x 12 = 96.