Homework/Extension
Step 15: Reason from Known Facts

National Curriculum Objectives:

Mathematics Year 6: (6C8) Solve problems involving addition, subtraction, multiplication and division

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)
Developing Use the known fact to help complete the other multiplication towers. Including whole numbers with up to 4-digits and numerals only.
Expected Use the known fact to help complete the other multiplication towers. Including numbers with up to 4-digits and to one decimal place using numerals only.
Greater Depth Use the known fact to help complete the other multiplication towers. Including numbers with up to 4-digits and to one decimal place where reasoning from known facts may be indirect and require more than one step. Numbers given in numerals or words.

Questions 2, 5 and 8 (Varied Fluency)
Developing Shade the true calculations using the known fact as support. Including whole numbers with up to 4-digits and numerals only.
Expected Shade the true calculations using the known fact as support. Including numbers with up to 4-digits and to one decimal place using numerals only.
Greater Depth Shade the true calculations using the known fact as support. Including numbers with up to 4-digits and to one decimal place. Reasoning from known fact may be indirect and require more than one step.

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Solve the word problems using the given known fact. Including whole numbers with up to 4-digits and numerals only.
Expected Solve the word problems using the given known fact. Including numbers with up to 4-digits and to one decimal place using numerals only.
Greater Depth Solve the word problems using the given known fact. Including numbers with up to 4-digits and to two decimal places in the context of money. Reasoning from known fact may be indirect and require more than one step. Numbers given in numerals or words.

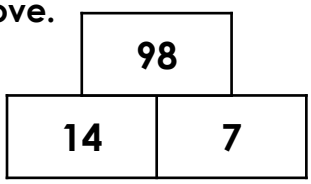
More Year 6 Four Operations resources.

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

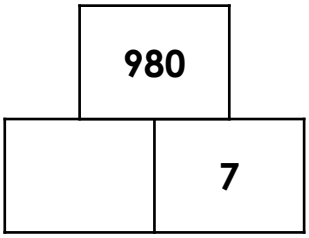
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Reason from Known Facts

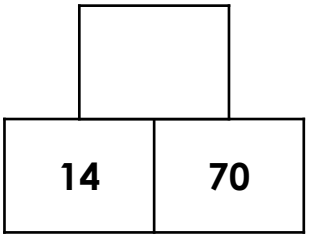
1. In this tower, two numbers are multiplied to give the number above. Use the known fact to help you complete the other towers.



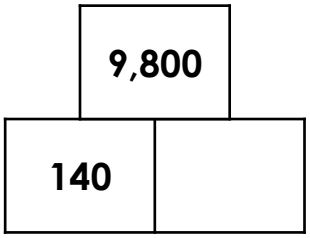
A.



B.



C.



D

VF
HW/Ext

2. Shade all of the calculations that are true. Use the known fact to help you.

8 x 9 = 72

A. 80 x 9 = 720

B. 8 x 90 = 72

C. 800 x 9 = 7,200

D. 80 x 90 = 720

E. 8 x 900 = 7,200

F. 8 x 90 = 720

D

VF
HW/Ext

3. Jack saves £3 each day. After 6 days he has saved £18.

A. How much will he have saved after 7 days?



B. How much will he have saved after 70 days?

C. How much will he have saved after 700 days?

D. Jack has £1,800. How long has he been saving for?

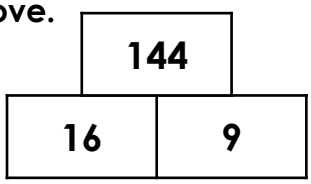
D

RPS
HW/Ext

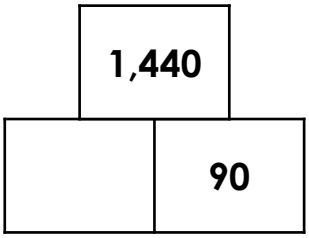
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Reason from Known Facts

4. In this tower, two numbers are multiplied to give the number above. Use the known fact to help you complete the other towers.



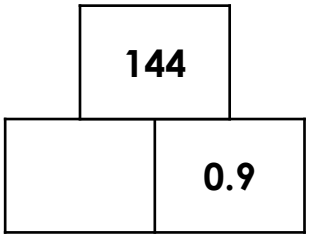
A.



B.



C.



E

VF
HW/Ext

5. Shade all of the calculations that are true. Use the known fact to help you.

3,472 ÷ 14 = 248

A. 248 x 14 = 3,472

B. 248 x 15 = 3,720

C. 3,472 ÷ 1.4 = 24.8

D. 13 x 248 = 3,224

E. 3,472 ÷ 140 = 24.8

F. 2,480 x 1.4 = 347. 2

E

VF
HW/Ext

6. Emma's sunflower grows 3.5mm each day. After 7 days her sunflower is 24.5mm tall.

A. How tall is the sunflower after 8 days?



B. How tall was the sunflower after 80 days?

C. Emma's sunflower is now 245mm tall. How many days has it been growing for?

D. Ben feeds his sunflower with plant food. Ben's sunflower is 2,450mm tall after 70 days. How much did it grow each day?

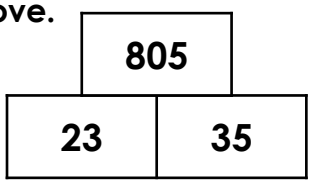
E

RPS
HW/Ext

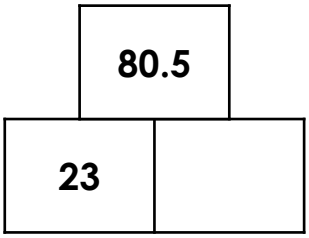
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Reason from Known Facts

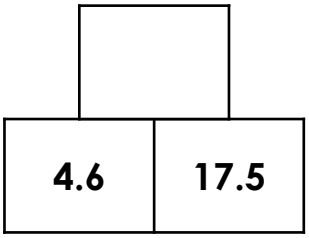
7. In this tower, two numbers are multiplied to give the number above. Use the known fact to help you complete the other towers.



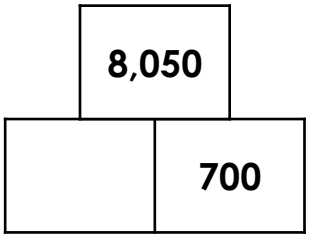
A.



B.



C.



GD

VF
HW/Ext

8. Shade all of the calculations that are true. Use the known fact to help you.

42 x 18 = 756

A. 4.2 x 18 = 75.6

B. 7,560 ÷ 1.8 = 420

C. 84 x 0.9 = 756

D. 2.1 x 36 = 75.6

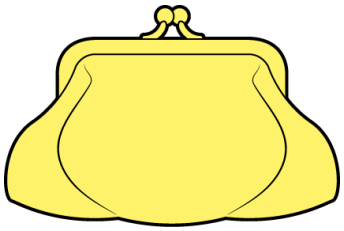
E. 75.6 ÷ 3.6 = 210

F. 42 x 36 = 1,512

GD

VF
HW/Ext

9. Jane saved three pounds and 18p each week. After seventeen weeks she has £54.06.



A. How much will she have saved after 34 weeks?

B. How much will she have saved after eight and a half weeks?

C. Rayhan saves £6.36 each week. He says, 'After 8.5 weeks, I will have saved the same as Jane.' Is he correct? Explain your answer.

D. Sean saves £2703 over 85 weeks. How much does he save each week?

GD

RPS
HW/Ext

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Homework/Extension
Reason from Known Facts

Developing

1. A = 140, B = 980, C = 70
2. A, C, E and F are true.
3. A = £21, B = £210, C = £2,100, D = 600 days

Expected

4. A = 16, B = 9, C = 160
5. A, B, D, E are true.
6. A = 28mm, B = 280mm, C = 70 days, D = 35mm

Greater Depth

7. A = 3.5, B = 80.5, C = 11.5
8. A, D and F are true.
9. A = £108.12, B = £27.03, C = Rayhan is correct because he saves double the amount for half the time. D = £31.80

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