Homework/Extension
Step 9: Fractions of a Quantity

National Curriculum Objectives:

Mathematics Year 4: (4F2) Recognise and show, using diagrams, families of common equivalent fractions
Mathematics Year 4: (4F10a) Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)
Developing Match the representations and calculations for a fraction of a quantity. Use the representation to solve the calculation. Using unit fractions only.
Expected Match the representations and calculations for a fraction of a quantity. Use the representation to solve the calculation. Using non-unit fractions in their simplest form.
Greater Depth Match the representations of a related fact and calculation for a fraction of a quantity. Use the representation to solve the calculation. Using non-unit fractions.

Questions 2, 5 and 8 (Varied Fluency)
Developing Identify which fractions of a quantity have been calculated incorrectly. Using unit fractions only.
Expected Identify which fractions of a quantity have been calculated incorrectly. Using non-unit fractions in their simplest form.
Greater Depth Identify which fractions of a quantity have been calculated incorrectly. Using non-unit fractions and related facts.

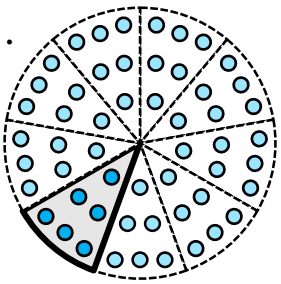
Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Explain who has placed their fractions of quantities correctly in ascending order. Using unit fractions only.
Expected Explain who has placed their fractions of quantities correctly in ascending order. Using non-unit fractions in their simplest form.
Greater Depth Explain who has placed their fractions of quantities correctly in ascending order. Related fact provided to calculate non-unit fractions of amounts.

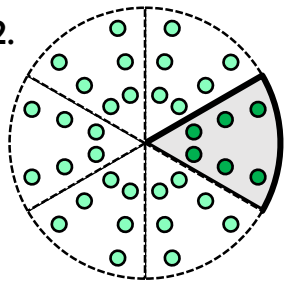
More Year 4 Fractions resources.

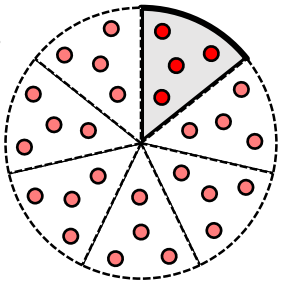
Did you like this resource? Don't forget to review it on our website.

Fractions of a Quantity

1. Match the representations to the calculations and solve.

1. 

2. 

3. 

A. $\frac{1}{7}$ of 28 = ☐

B. $\frac{1}{9}$ of 54 = ☐

C. $\frac{1}{6}$ of 36 = ☐

D

VF
HW/Ext

2. Circle the incorrect calculations.

A. $\frac{1}{4}$ of 44 = 14

B. $\frac{1}{7}$ of 35 = 5

C. $\frac{1}{6}$ of 24 = 7

D. $\frac{1}{12}$ of 72 = 8

E. $\frac{1}{9}$ of 36 = 4

F. $\frac{1}{3}$ of 60 = 20

D

VF
HW/Ext

3. Jaydan and Sam place their calculations in ascending order.

Jaydan

$\frac{1}{8}$ of 16 $\frac{1}{4}$ of 20 $\frac{1}{5}$ of 40 $\frac{1}{6}$ of 60

$\frac{1}{9}$ of 72 $\frac{1}{8}$ of 48 $\frac{1}{7}$ of 21 $\frac{1}{6}$ of 42

Sam

Who is correct? Explain how you know.

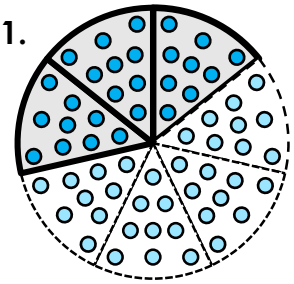
D

RPS
HW/Ext

Fractions of a Quantity

4. Match the representations to the calculations and solve.

1.



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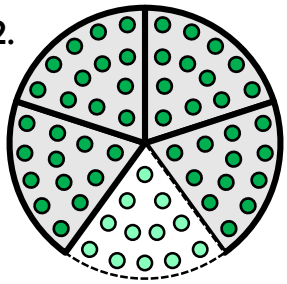

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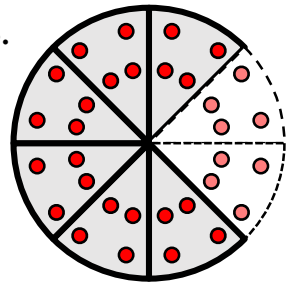


A. $\frac{6}{8}$ of 32 = ☐

B. $\frac{3}{7}$ of 63 = ☐

C. $\frac{4}{5}$ of 60 = ☐

E

VF
HW/Ext

5. Circle the incorrect calculations.

A. $\frac{3}{5}$ of 40 = 24

B. $\frac{7}{11}$ of 33 = 24

C. $\frac{4}{6}$ of 42 = 28

D. $\frac{9}{12}$ of 72 = 56

E. $\frac{5}{7}$ of 42 = 32

F. $\frac{7}{8}$ of 64 = 56

E

VF
HW/Ext

6. Manveer and May place their calculations in ascending order.

Manveer

$\frac{3}{4}$ of 32 $\frac{2}{6}$ of 42 $\frac{5}{7}$ of 35 $\frac{3}{8}$ of 48

$\frac{1}{8}$ of 48 $\frac{3}{7}$ of 35 $\frac{3}{4}$ of 32 $\frac{5}{6}$ of 42

May

Who is correct? Explain how you know.

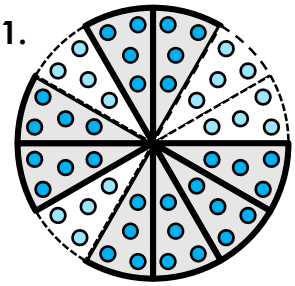
E

RPS
HW/Ext

Fractions of a Quantity

7. Use your knowledge of related facts to match the calculations with the correct representation and find the answer.

1.



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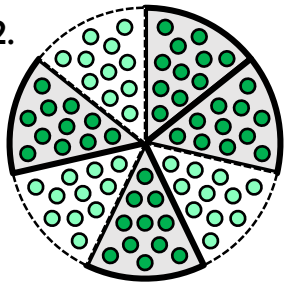

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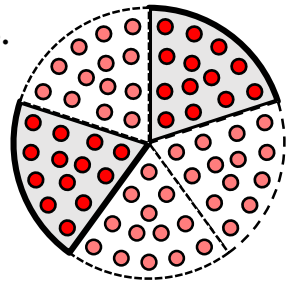

A. $\frac{4}{7}$ of 154 = ☐

B. $\frac{4}{5}$ of 650 = ☐

C. $\frac{8}{12}$ of 480 = ☐

GD

VF
HW/Ext

8. Circle the incorrect calculations using your knowledge of related facts to help you.

A. $\frac{2}{6}$ of 540 = 160

B. $\frac{5}{9}$ of 630 = 350

C. $\frac{3}{4}$ of 4,000 = 3,000

D. $\frac{1}{3}$ of 210 = 7

E. $\frac{4}{7}$ of 490 = 270

F. $\frac{5}{12}$ of 108 = 45

GD

VF
HW/Ext

9. Tameera and Axel place their calculations in ascending order. They have used the related fact $\frac{2}{7}$ of 84 = 24 to help them.

Tameera

$\frac{3}{7}$ of 70 $\frac{4}{7}$ of 84 $\frac{2}{7}$ of 840 $\frac{3}{7}$ of 700

$\frac{4}{7}$ of 63 $\frac{3}{7}$ of 77 $\frac{4}{7}$ of 168 $\frac{6}{7}$ of 140

Axel

Who is correct? Explain how you know.

GD

RPS
HW/Ext

Homework/Extension
Fractions of a Quantity

Developing

1. 1 and B – 6; 2 and C – 6; 3 and A – 4

2. A, C and D

3. Jaydan has placed his fractions in ascending order correctly:

$\frac{1}{8}$ of 16 = 2 $\frac{1}{4}$ of 20 = 5 $\frac{1}{5}$ of 40 = 8 $\frac{1}{6}$ of 60 = 10

Sam's fractions have been placed in descending order, aside from the last calculation.

Expected

4. 1 and B – 27; 2 and C – 48; 3 and A – 24

5. B, D and E

6. May has placed her fractions in ascending order correctly:

$\frac{1}{8}$ of 48 = 6 $\frac{3}{7}$ of 35 = 15 $\frac{3}{4}$ of 32 = 24 $\frac{5}{6}$ of 42 = 35

Manveer has placed his fractions in ascending order of the denominator.

Greater Depth

7. 1 and C – 320; 2 and A – 88; 3 and B – 520

8. A, D and E

9. Tameera has placed her fractions in ascending order correctly:

$\frac{3}{7}$ of 70 = 30 $\frac{4}{7}$ of 84 = 48 $\frac{2}{7}$ of 840 = 240 $\frac{3}{7}$ of 700 = 300

Axel needs to swap the position of his first and second fraction.