# Varied Fluency
# 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:

**Developing** Questions to support finding fractions of quantities. Involves unit fractions only.
**Expected** Questions to support finding fractions of quantities. Involves non-unit fractions in their simplest form.
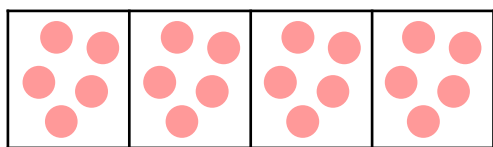**Greater Depth** Questions to support finding fractions of quantities. Involves non-unit fractions and the use of related facts.

## More Year 4 Fractions resources.

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

# Fractions of a Quantity

## Fractions of a Quantity

**1a.** Circle the number that is $\frac{1}{4}$ of the whole number represented below.

**20**     **5**     **14**

VF

**1b.** Circle the number that is $\frac{1}{3}$ of the whole number represented below.
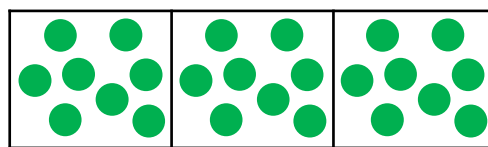
**13**     **24**     **8**

VF

**2a.** Solve the calculation.

$$\frac{1}{3} \text{ of } 21 = \boxed{\phantom{0}}$$

| 21 | | |
|---|---|---|
| 7 | 7 | 7 |

VF

**2b.** Solve the calculation.

$$\frac{1}{10} \text{ of } 60 = \boxed{\phantom{0}}$$

| 60 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

VF

**3a.** Find a third of thirty-six.
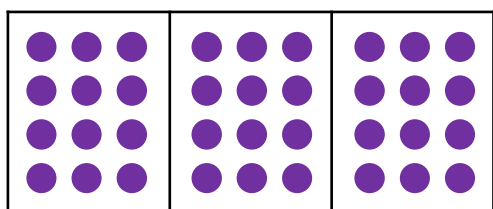
$$\frac{1}{3} \text{ of } 36 = \boxed{\phantom{0}}$$

VF

**3b.** Find a quarter of sixty.
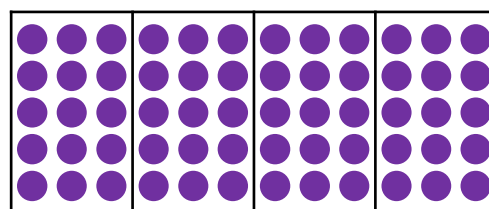
$$\frac{1}{4} \text{ of } 60 = \boxed{\phantom{0}}$$

VF

**4a.** Use counters to match the calculation to the answer.

A.  $\frac{1}{10}$ of 80     **8**

B.  $\frac{1}{4}$ of 24     **6**

C.  $\frac{1}{3}$ of 15     **8**

D.  $\frac{1}{2}$ of 16     **5**

VF

**4b.** Use counters to match the calculation to the answer.

A.  $\frac{1}{10}$ of 50     **7**

B.  $\frac{1}{3}$ of 21     **5**

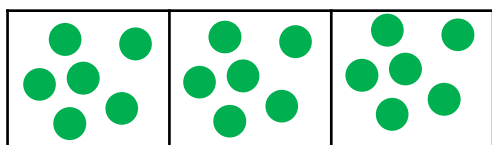C.  $\frac{1}{4}$ of 44     **14**

D.  $\frac{1}{2}$ of 28     **11**

VF

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Varied Fluency – Fractions of a Quantity – Year 4 Developing

# Fractions of a Quantity

# Fractions of a Quantity

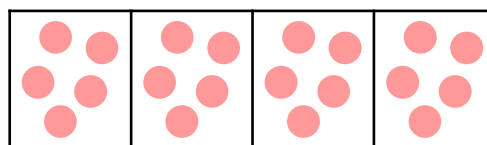**5a.** Circle the number that is $\frac{2}{3}$ of the whole number represented below.

| 12 | 10 | 18 |

VF

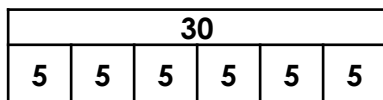**5b.** Circle the number that is $\frac{3}{4}$ of the whole number represented below.
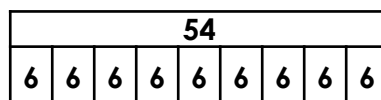
| 5 | 20 | 15 |

VF

**6a.** Solve the calculation.
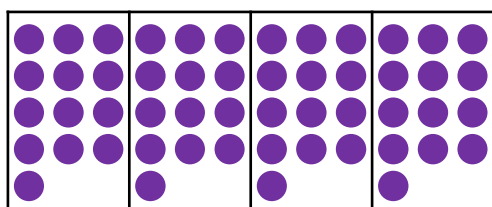
$$\frac{5}{6} \text{ of } 30 = \square$$

| 30 |
| 5 | 5 | 5 | 5 | 5 | 5 |

VF

**6b.** Solve the calculation.

$$\frac{7}{9} \text{ of } 54 = \square$$

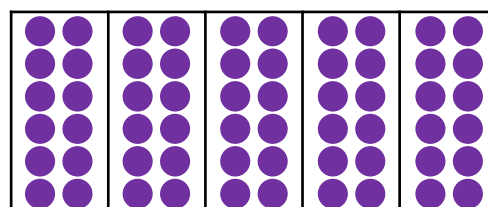| 54 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

VF

**7a.** Find three quarters of fifty-two.

$$\frac{3}{4} \text{ of } 52 = \square$$

VF

**7b.** Find two fifths of sixty.

$$\frac{2}{5} \text{ of } 60 = \square$$

VF

**8a.** Use counters to match the calculation to the answer.

A. $\frac{3}{5}$ of 35     63

B. $\frac{9}{10}$ of 70     21

C. $\frac{3}{7}$ of 56     45

D. $\frac{5}{8}$ of 72     24

VF

**8b.** Use counters to match the calculation to the answer.

A. $\frac{5}{6}$ of 36     24

B. $\frac{2}{3}$ of 36     33

C. $\frac{5}{7}$ of 28     30
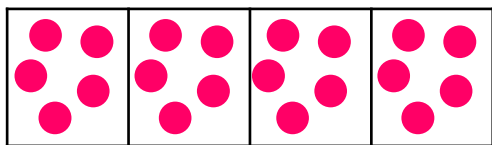
D. $\frac{3}{4}$ of 44     20

VF

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Varied Fluency – Fractions of a Quantity – Year 4 Expected

**9a.** Circle the number that is $\frac{4}{8}$ of the whole number represented below.

| 20 | 40 | 10 |

**9b.** Circle the number that is $\frac{4}{10}$ of the whole number represented below.
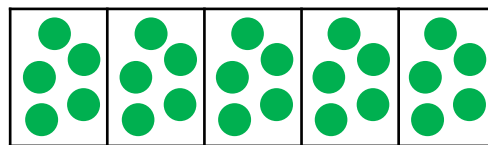
| 10 | 25 | 20 |

**10a.** Use the first calculation to solve the second.

$$\frac{6}{8} \text{ of } 44 = 33$$

$$\frac{6}{8} \text{ of } 880 = \square$$

**10b.** Use the first calculation to solve the second.

$$\frac{5}{7} \text{ of } 42 = 30$$

$$\frac{5}{7} \text{ of } 840 = \square$$

**11a.** Use the related facts to solve both calculations.

$$\text{If } \frac{1}{4} \text{ of } 40 = \square$$

$$\text{then } \frac{3}{4} \text{ of } 80 = \square$$

**11b.** Use the related facts to solve both calculations.

$$\text{If } \frac{2}{5} \text{ of } 75 = \square$$

$$\text{then } \frac{4}{5} \text{ of } 150 = \square$$

**12a.** Use counters to match the calculation to the answer.

A. $\frac{6}{9}$ of 27   | 20

B. $\frac{3}{8}$ of 80   | 18

C. $\frac{6}{9}$ of 270  | 30

D. $\frac{6}{12}$ of 40  | 180

**12b.** Use counters to match the calculation to the answer.

A. $\frac{4}{6}$ of 30   | 23

B. $\frac{3}{5}$ of 25   | 20

C. $\frac{5}{10}$ of 46  | 24

D. $\frac{9}{12}$ of 32  | 15

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Varied Fluency – Fractions of a Quantity – Year 4 Greater Depth

# Varied Fluency
# Fractions of a Quantity

## Developing

**1a.** 5

**2a.** 7

**3a.** 12

**4a.** A. 8; B. 6; C. 5; D. 8

## Developing

**1b.** 8

**2b.** 6

**3b.** 15

**4b.** A. 5; B. 7; C. 11; D. 14

## Expected

**5a.** 12

**6a.** 25

**7a.** 39

**8a.** A. 21; B. 63; C. 24; D. 45

## Expected

**5b.** 15

**6b.** 42

**7b.** 24

**8b.** A. 30; B. 24; C. 20; D. 33

## Greater Depth

**9a.** 10

**10a.** 660

**11a.** If $\frac{1}{4}$ of 40 = 10, then $\frac{3}{4}$ of 80 = 60 .

**12a.** A. 18; B. 30; C. 180; D. 20

## Greater Depth

**9b.** 10

**10b.** 600

**11b.** If $\frac{2}{5}$ of 75 = 30, then $\frac{4}{5}$ of 150 = 120 .

**12b.** A. 20; B. 15; C. 23; D. 24

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