

# Varied Fluency

## Step 5: Imperial Measures

### National Curriculum Objectives:

Mathematics Year 6: (6M5) [Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places](#)

Mathematics Year 6: (6M9) [Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate](#)

### Differentiation:

**Developing** Questions to support comparing and converting imperial measures. Converting using whole numbers, doubling or halving.

**Expected** Questions to support comparing and converting imperial measures. Converting numbers with up to 2 decimal places and using direct fractions of the conversions, e.g.  $\frac{1}{8}$  when converting ounces to pounds.

**Greater Depth** Questions to support comparing and converting imperial measures. Converting numbers up to 2 decimal places, percentages and using equivalent fractions of the conversions, e.g.  $\frac{2}{16}$  when converting ounces to pounds.

More [Year 5 and 6 Converting Units](#) resources.

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## Imperial Measures

1a. Jacob and Zac are measuring the weight of their pencil cases.

Jacob's pencil case weighs 28g.

Zac's pencil case weighs 2 ounces.

Whose pencil case is the heaviest?



6 VF

## Imperial Measures

1b. Hafsa and Sophia are measuring the weight of their lunch boxes.

Hafsa's lunch box weighs 16 ounces.

Sophia's lunch box weighs 2 pounds.

Whose lunch box is the heaviest?



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2a. Are the following statements true or false?

A. 2 stones = 28 pounds

B. 5cm = 5 inches

C. 24 inches = 3 feet



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2b. Are the following statements true or false?

A. 16 pints = 1 gallon

B. 36 inches = 3 feet

C. 2 inches  $\approx$  5 cm



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3a. Match the measurements to their conversions.

32 ounces   2 stones   2 gallons

16 pints   2 pounds   28 pounds



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3b. Match the measurements to their conversions.

24''   56g   5cm

2''   2 feet   2 ounces



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4a. Fill in the missing measurements.

gallon = 8 pints

2 feet =  inches

pounds = 2 stones



6 VF

4b. Fill in the missing measurements.

g  $\approx$  1 ounce

2 gallons =  pints

inches = 1 foot



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## Imperial Measures

5a. Isaac fills his car with 64 pints of petrol.

Jaxon fills his car with 10 gallons of petrol.

Who used the largest amount of petrol?



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## Imperial Measures

5b. Millie and Iqra are comparing the weights of their dogs.

Millie's dog weighs 20 pounds.

Iqra's dog weighs 80 ounces.

Who has the heaviest dog?



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6a. Are the following statements true or false?

A. 3 stones = 30 pounds

B. 4 ounces = 1 pound

C. 1 pint = 0.125 gallons



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6b. Are the following statements true or false?

A. 25 cm  $\approx$  100 inches

B. 11 feet = 132 inches

C. 5.6 litres  $\approx$  0.1 pint



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7a. Match the measurements to their conversions.

10cm    100''    1.25cm

0.5''    4''    250cm



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7b. Match the measurements to their conversions.

4 ounces    3''    3 gallons

0.25 feet    24 pints    0.25 pounds



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8a. Fill in the missing measurements.

pounds = 48 ounces

0.25 pounds =  ounces

pints = 15 gallons



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8b. Fill in the missing measurements.

inches = 3 feet

40 pints =  gallons

pounds = 320 ounces



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## Imperial Measures

## Imperial Measures

9a. Jack is 130cm tall.

Max is 5 feet tall.

Who is the tallest?



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9b. Ivy's pet weighs 14 pounds.

Isla's pet weighs 2,800g.

Whose pet is the heaviest?



6 VF

10a. Are the following statements true or false?

A. 1 pint =  $\frac{1}{8}$  gallon

B. 25 % of 1 pound = 5 ounces

C.  $\frac{1}{2}$  stone = 8 pounds



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10b. Are the following statements true or false?

A.  $\frac{1}{2}$  pint  $\approx$  0.28 litres

B.  $\frac{1}{12}$  foot = 2 inches

C. 10% of 1 ounce  $\approx$  0.28g



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11a. Match the measurements to their conversions.

10% of 1 pound    1.12 L     $\frac{1}{14}$  stone

1 pound    2 pints    1.6 ounces



6 VF

11b. Match the measurements to their conversions.

25% of 1 foot    0.25 pounds     $\frac{1}{10}$  ounce

4 ounces    2.8g    3 inches



6 VF

12a. Fill in the missing measurements.

pints = 1.5 gallons

20% of 1 pound =  ounces

ounces  $\approx$  84g



6 VF

12b. Fill in the missing measurements.

pounds = 5.5 stones

2.5 inches =  cm

pounds = 1.6 ounces



6 VF

## Varied Fluency Imperial Measures

Note: Some answers will be approximations.

### Developing

1a. **Zac's**

2a. **A. True B. False C. False**

3a. **32 ounces = 2 pounds, 2 stones = 28 pounds, 2 gallons = 16 pints**

4a. **1 gallon = 8 pints, 2 feet = 24 inches, 28 pounds = 2 stones**

### Expected

5a. **Jaxon**

6a. **A. False B. False C. True**

7a. **10cm = 4", 100" = 250cm, 1.25cm = 0.5"**

8a. **3 pounds = 48 ounces, 0.25 pounds = 4 ounces, 120 pints = 15 gallons.**

### Greater Depth

9a. **Max**

10a. **A. True B. False C. False**

11a. **10% of 1 pound = 1.6 ounces, 1.12 L = 2 pints,  $\frac{1}{14}$  stone = 1 pound**

12a. **12 pints = 1.5 gallons, 20% of 1 pound = 3.2 ounces, 3 ounces  $\approx$  84g**

## Varied Fluency Imperial Measures

Note: Some answers will be approximations.

### Developing

1b. **Sophia's**

2b. **A. False B. True C. True**

3b. **24" = 2 feet, 56g = 2 ounces, 5cm = 2"**

4b. **28g  $\approx$  1 ounce, 2 gallons = 16 pints, 12" = 1 foot**

### Expected

5b. **Millie**

6b. **A. False B. True C. False**

7b. **4 ounces = 0.25 pounds, 3" = 0.25 feet, 3 gallons = 24 pints**

8b. **36 inches = 3 feet, 40 pints = 5 gallons, 320 ounces = 20 pounds.**

### Greater Depth

9a. **Ivy**

10a. **A. True B. False C. False**

11b. **25% of 1 foot = 3 inches, 0.25 pounds = 4 ounces,  $\frac{1}{10}$  ounce = 2.8g,**

12b. **77 pounds = 5.5 stones, 2.5 inches = 6.25cm, 0.1 pounds = 1.6 ounces**