

Miss Hughes' group – Reasoning and problem solving answers

Bronze

**1a.** Mark has made a mistake. Two fifths is not equivalent to one half.

**2a.** Various possible answers, for example:

$$\frac{1}{4} \text{ as } \frac{2}{8} \text{ and } \frac{2}{4} \text{ as } \frac{1}{2}$$

**3a.** Object A, because it shows one quarter.

A denominator of 4 cannot be turned into a denominator of 9 by multiplication or division, so the fractions are not equivalent.

**1b.** Tyson has made a mistake. Two fifths and three fifths are not equivalent to one third and two thirds.

**2b.** Various possible answers, for example:

$$\frac{4}{8} \text{ as } \frac{1}{2} \text{ and } \frac{6}{8} \text{ as } \frac{3}{4}$$

**3b.** Object B, because it shows three fifths. A denominator of 5 cannot be turned into a denominator of 8 by multiplication or division, so the fractions are not equivalent.

Silver

**4a.** Obed has made a mistake. His ninths are not equivalent fractions to fifths.

**5a.** Various possible answers, for example:

$$\frac{2}{4} \text{ as } \frac{6}{12} \text{ and } \frac{3}{4} \text{ as } \frac{6}{8}$$

**6a.** Object C, because it shows three tenths.

A denominator of 10 cannot be turned into a denominator of 4 by multiplication or division, so the fractions are not equivalent.

**4b.** Bam has made a mistake. His elevenths are not equivalent fractions to sixths.

**5b.** Various possible answers, for example:

$$\frac{2}{6} \text{ as } \frac{3}{9} \text{ and } \frac{3}{6} \text{ as } \frac{6}{12}$$

**6b.** Object B, because it shows three eighths which is not equivalent to the fraction shown on the number line.

Gold

**7a.** Pippa has made a mistake. She has not used fractions which are equivalent to fourteenths.

**8a.** Various possible answers, for example:

$$\frac{3}{15} \text{ as } \frac{1}{5} \text{ and } \frac{10}{15} \text{ as } \frac{2}{3}$$

**9a.** Object C, because it shows seven eighths. The two fractions have the same denominator but different numerators so cannot possibly be equivalent.

**7b.** Tia has made a mistake. She has not used fractions which are equivalent to sixteenths.

**8b.** Various possible answers, for example:

$$\frac{1}{12} \text{ as } \frac{2}{24} \text{ and } \frac{8}{12} \text{ as } \frac{4}{6}$$

**9b.** Object A, because it shows fourteen eighteenths which is equivalent to  $\frac{7}{9}$ , not  $\frac{6}{9}$ .