

Miss Hughes' group – Reasoning and problem solving answers

Bronze

1a. Michael is incorrect because the sections he has drawn are not equal. One quarter is less than one half.

$$2a. \frac{1}{3} < \frac{1}{2}$$

3a. Jemma is incorrect. One quarter is smaller than one half.

1b. Zelda is incorrect because the sections she has drawn are not equal. One third is less than one half.

$$2b. \frac{1}{4} < \frac{3}{3} \quad \frac{2}{4} < \frac{3}{3} \quad \frac{3}{4} < \frac{3}{3}$$

3b. Malik is incorrect. Two thirds is larger than one third.

Silver

4a. Yasmin is incorrect because she has not divided her bar into seven equal parts. Two sevenths are less than three sevenths.

5a. Various answers, for example;

$$\frac{1}{2} > \frac{1}{8} ; \frac{1}{4} > \frac{1}{8} ; \frac{1}{6} > \frac{1}{8}$$

6a. Xin is incorrect. One twelfth is smaller than one eighth. The bigger the denominator, the smaller the fraction.

4b. Simon is incorrect because he has shown four sixths instead of four twelfths. Four twelfths are less than seven twelfths.

5b. Various answers, for example;

$$\frac{1}{6} < \frac{1}{3} ; \frac{1}{6} < \frac{2}{3} ; \frac{1}{6} < \frac{1}{2}$$

6b. Henry is incorrect. Four fifths is larger than two fifths. The numerator shows that four is larger than two.

Gold

7a. Tara is incorrect because she has not divided her bar into six equal parts. Four sixths is equal to two thirds.

8a. Various answers, for example;

$$\frac{1}{2} > \frac{1}{4} ; \frac{1}{2} > \frac{1}{8} ; \frac{1}{4} > \frac{1}{8}$$
$$\frac{2}{4} > \frac{1}{8} ; \frac{2}{4} > \frac{1}{4}$$

9a. Hillary is incorrect. Four eighths is less than three quarters. Hillary will have more sweets if she has three quarters.

7b. Ishmael is incorrect because he has not shared the bar into ten equal parts. Eight tenths is equal to four fifths.

8b. Various answers, for example;

$$\frac{1}{2} < \frac{6}{8} ; \frac{1}{2} < \frac{4}{6} ; \frac{1}{8} < \frac{2}{4}$$
$$\frac{1}{4} < \frac{6}{8} ; \frac{1}{8} < \frac{1}{4}$$

9b. Milo is incorrect. Two thirds is equal to four sixths. This is more than three sixths and one third (which are not equal). Milo will have fewer marbles if he takes three sixths of the marbles.