Blue - Answers

Teddy and Rosie are finding the missing numbers in the sequence.

3, ☐, ☐, ☐, ☐, ☐, ☐, ☐, 4

a)

I think the missing fractions are sevenths because there are seven blank number cards.

Do you agree with Teddy? No

Explain your answer.

If they were sevenths there would only be 6 blank cards because $3\frac{7}{7} = 4$

b) Complete the sequence.

3, $3\frac{1}{8}$, $3\frac{2}{8}$, $3\frac{3}{8}$, $3\frac{4}{8}$, $3\frac{5}{8}$, $3\frac{6}{8}$, $3\frac{7}{8}$, 4

c)

I think one of the missing fractions is equivalent to $3\frac{1}{2}$

Is Rosie correct? Yes

Explain how you know.

$\frac{4}{8}$ is equivalent to $\frac{1}{2}$ so $3\frac{4}{8}$ is equivalent to $3\frac{1}{2}$.

d) Which other fractions in the sequence can you find equivalent fractions for?

I am thinking of a number sequence. The 1st and 4th terms are consecutive integers.

Write the rule for Amir's sequence.

Add one third. (Accept subtract one third)

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1) *There are many different possibilities. Three possible sequences are shown below:*

   $3\frac{1}{2}$, $4\frac{1}{4}$, 5, $5\frac{6}{8}$, $6\frac{1}{2}$ *(This sequence is increasing by* $\frac{6}{8}$.*)*

   $5\frac{3}{8}$, $5\frac{6}{8}$, $6\frac{1}{8}$, $6\frac{1}{2}$, $6\frac{7}{8}$, $7\frac{1}{4}$ *(This sequence is increasing by* $\frac{3}{8}$.*)*

   $9\frac{10}{12}$, $9\frac{1}{4}$, $8\frac{8}{12}$, $8\frac{1}{12}$, $7\frac{1}{2}$ *(This sequence is decreasing by* $\frac{7}{12}$.*)*

2) *There are a number of different possibilities. Three possible sequences are shown below:*

   $4\frac{3}{4}$, $5\frac{3}{8}$, 6, $6\frac{5}{8}$, $7\frac{1}{4}$ *(This sequence is increasing by* $\frac{5}{8}$.*)*

   $4\frac{3}{4}$, $5\frac{1}{4}$, $5\frac{3}{4}$, $6\frac{1}{4}$, $6\frac{3}{4}$, $7\frac{1}{4}$ *(This sequence is increasing by* $\frac{1}{2}$.*)*

   $4\frac{3}{4}$, $5\frac{7}{12}$, $6\frac{5}{12}$, $7\frac{1}{4}$ *(This sequence is increasing by* $\frac{10}{12}$.*)*