

Grade 7 Maths Worksheet

Numbers and operations

Questions:

1. John and Given were tiling a $24\frac{1}{2}$ square metres floor. On the first day, John tiled $7\frac{1}{3}$ square metres and Given tiled $4\frac{3}{5}$ square metres.
 - a) Have they tiled 50% of the floor at this stage?
 - b) How many square metres of floor still need to be tiled?
 - c) If each tile has an area of $\frac{2}{5}$ of a square metre, how many tiles will cover the complete floor?

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Solution

1. a) They have tiled: $7\frac{1}{3} + 4\frac{3}{5} = 11 + \frac{1}{3} + \frac{3}{5} = 11 + \frac{5+9}{15} = 11 + \frac{14}{15} = 11\frac{14}{15}$

Half of the floor = 50%: $\frac{1}{2} \times 24\frac{1}{2} = \frac{1}{2} \times \frac{49}{2} = \frac{49}{4} = 12\frac{1}{4}$. They are not yet halfway.

b) $24\frac{1}{2} - 11\frac{14}{15} = 24 - 11 - \frac{1}{2} - \frac{14}{15}$
 $= 13 - \frac{15}{30} - \frac{28}{30}$
 $= \frac{390-43}{30}$
 $= \frac{347}{30}$
 $= 11\frac{17}{30}$

So $11\frac{17}{30}$ square metres must still be tiled.

c) $24\frac{1}{2} \div \frac{2}{5} = \frac{49}{2} \times \frac{5}{2} = \frac{245}{4} = 61\frac{1}{4}$. So we will need 62 tiles to cover the complete floor.
 That is if there are no breakages.

All factors can appear in pairs where the signs are positive both, or negative both.

Here the working of rates separately and together becomes the focus.

Appendix of Assignment Tools

Common fraction

Area tiling

Percentage

Rate

Adding and multiplication of common fractions