

Date

T: express quotients as decimals and fractions

A quotient is a posh maths word for the answer to a division question.

When we divide we sometimes get a remainder. This remainder can be shown as a whole number.

*Example:*  $13 \div 2 = 6r1$

However, this remainder can also be shown as a fraction or a decimal

*Example:*  $13 \div 2 = 6 \frac{1}{2}$  or  $13 \div 2 = 6.5$

To calculate what fraction a remainder is you:

- make the divisor (the number you are dividing by) the bottom number
- make the remainder the top number

To calculate what decimal a remainder is you:

- can convert the fraction to a percentage and use this to get the decimal

OR

- you might just know what it is because you are getting used to working with the common fractions and decimals e.g.  $1/2 = 0.5$ ,  $1/4 = 0.25$ ,  $1/5 = 0.2$ ,  $1/10 = 0.1$ ,  $3/4 = 0.75$  and so on

For each of these questions give the answer in **3 different ways**:

- a) with the remainder as a **whole number**
- b) with the remainder as a **fraction**
- c) with the remainder as a **decimal**

### Questions

- 1)  $5 \div 2$
- 2)  $9 \div 2$
- 3)  $13 \div 4$
- 4)  $23 \div 4$
- 5)  $22 \div 5$
- 6)  $49 \div 5$
- 7)  $71 \div 10$
- 8)  $59 \div 10$

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### Questions

- |                 |         |                      |          |
|-----------------|---------|----------------------|----------|
| 1) $5 \div 2$   | 1a) 2r1 | 1b) $2 \frac{1}{2}$  | 1c) 2.5  |
| 2) $9 \div 2$   | 2a) 4r1 | 2b) $4 \frac{1}{2}$  | 2c) 4.5  |
| 3) $13 \div 4$  | 3a) 3r1 | 3b) $3 \frac{1}{4}$  | 3c) 3.25 |
| 4) $23 \div 4$  | 4a) 5r3 | 4b) $5 \frac{3}{4}$  | 4c) 5.75 |
| 5) $22 \div 5$  | 5a) 4r2 | 5b) $4 \frac{2}{5}$  | 5c) 5.4  |
| 6) $49 \div 5$  | 6a) 9r4 | 6b) $9 \frac{4}{5}$  | 6c) 9.8  |
| 7) $71 \div 10$ | 7a) 7r1 | 7b) $7 \frac{1}{10}$ | 7c) 7.1  |
| 8) $59 \div 10$ | 8a) 5r9 | 8b) $5 \frac{9}{10}$ | 8c) 5.9  |