

1. Complete this doubling and halving method to find the factor pairs of 16

{You may cross out any calculations you don't need to do}

$$16 = 1 \times 16$$

$$\times 2 \downarrow \quad \downarrow \div 2$$

$$16 = 2 \times \dots$$

$$\times 2 \downarrow \quad \downarrow \div 2$$

$$16 = 4 \times \dots$$

$$\times 2 \downarrow \quad \downarrow \div 2$$

$$16 = 8 \times \dots$$

$$\times 2 \downarrow \quad \downarrow \div 2$$

$$16 = 16 \times \dots$$

2. (i) Complete this doubling and halving method to find some factor pairs of 44

$$44 = 1 \times 44$$

$$\times 2 \downarrow \quad \downarrow \div 2$$

$$44 = 2 \times \dots$$

$$\times 2 \downarrow \quad \downarrow \div 2$$

$$44 = 4 \times \dots$$

$$\times 2 \downarrow \quad \downarrow \div 2$$

$$~~44 = 8 \times \dots~~$$

(ii) Explain why 8 is not a factor of 44

3. (i) Complete this doubling and halving method to find some factor pairs of 28

$$28 = 1 \times 28$$

$$\times 2 \downarrow \quad \downarrow \div 2$$

$$28 = 2 \times \dots$$

$$\times 2 \downarrow \quad \downarrow \div 2$$

$$28 = 4 \times \dots$$

$$\times 2 \downarrow \quad \downarrow \div 2$$

$$\text{~~28 = 8 \times \dots~~}$$

(ii) Explain why 8 is not a factor of 28

4. (i) Complete this doubling and halving method to find some factor pairs of 100

$$100 = 1 \times 100$$

$$\times 2 \downarrow \quad \downarrow \div 2$$

$$100 = 2 \times \dots$$

$$\times 2 \downarrow \quad \downarrow \div 2$$

$$100 = 4 \times \dots$$

$$\times 2 \downarrow \quad \downarrow \div 2$$

$$~~100 = 8 \times \dots~~$$

(ii) Explain why 8 is not a factor of 100

Answers

1. 8
4
2
1
allow and encourage the last 2 rows to be crossed out
2. (i) 22
11
(ii) $8 \times \text{decimal} = 44$ OR similar
3. (i) 14
7
(ii) $8 \times \text{decimal} = 28$ OR similar
4. (i) 50
25
(ii) $8 \times \text{decimal} = 100$ OR similar