

Using Ratio Language

1. Circle the common multiples of 4 and 6.

44 12 91
32 96 60

| Key Facts | |
|--------------------|--------------------|
| $4 \times 2 = 8$ | $6 \times 2 = 12$ |
| $4 \times 5 = 20$ | $6 \times 5 = 30$ |
| $4 \times 10 = 40$ | $6 \times 10 = 60$ |
| $4 \times 12 = 48$ | $6 \times 12 = 72$ |

VF

4. Harry says,



The lowest common multiple of 8 and 9 is 72 because $8 \times 9 = 72$ and $9 \times 8 = 72$.

Is he correct? Prove it.

| Key Facts | |
|--------------------|---------------------|
| $8 \times 2 = 16$ | $9 \times 2 = 18$ |
| $8 \times 5 = 40$ | $9 \times 5 = 45$ |
| $8 \times 10 = 80$ | $9 \times 10 = 90$ |
| $8 \times 12 = 96$ | $9 \times 12 = 108$ |

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2. Use the key facts below to work out the first three common multiples of 8 and 12.

| Key Facts | |
|--------------------|----------------------|
| $8 \times 2 = 16$ | $12 \times 2 = 24$ |
| $8 \times 5 = 40$ | $12 \times 5 = 60$ |
| $8 \times 10 = 80$ | $12 \times 10 = 120$ |
| $8 \times 12 = 96$ | $12 \times 12 = 144$ |

The first three common multiples of 8 and 12 are:

, , .

VF

5. Below are 5 common multiples of 4 and 8. What numbers could be covered by the splats?

48



160



240

| Key Facts | |
|--------------------|--------------------|
| $4 \times 2 = 8$ | $8 \times 2 = 16$ |
| $4 \times 5 = 20$ | $8 \times 5 = 40$ |
| $4 \times 10 = 40$ | $8 \times 10 = 80$ |
| $4 \times 12 = 48$ | $8 \times 12 = 96$ |

PS

3. Here is part of a 100 square.

| | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|-----|
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

Circle three common multiples of 6 and 8.

VF

6. Move from start to finish by following the common multiples of 3 and 5. You cannot move diagonally.

START

| | | | | |
|-----|-----|-----|-----|-----|
| 15 | 225 | 350 | 355 | 70 |
| 215 | 60 | 110 | 265 | 250 |
| 185 | 135 | 90 | 105 | 160 |
| 205 | 190 | 23 | 150 | 260 |
| 39 | 47 | 269 | 240 | 315 |

FINISH

Key Facts

$3 \times 2 = 6$
 $3 \times 5 = 15$
 $3 \times 10 = 30$
 $3 \times 12 = 36$

Key Facts

$5 \times 2 = 10$
 $5 \times 5 = 25$
 $5 \times 10 = 50$
 $5 \times 12 = 60$

PS

Using Ratio Language

1. 12, 60 and 96
2. 24, 48 and 72
3. 48, 72 and 96
4. Harry is correct. $8 \times 9 = 72$ and is commutative, so $9 \times 8 = 72$. This is the lowest common multiple of 8 and 9.
5. Various answers, for example: 80; 64; 112.
- 6.

START

| | | | | |
|-----|-----|-----|-----|-----|
| 15 | 225 | 350 | 355 | 70 |
| 215 | 60 | 110 | 265 | 250 |
| 185 | 135 | 90 | 105 | 160 |
| 205 | 190 | 23 | 150 | 260 |
| 39 | 47 | 269 | 240 | 315 |

FINISH