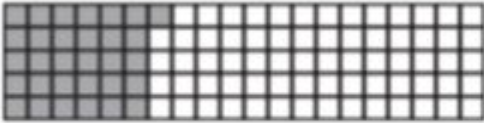


Power maths answers for week 5

Day 1:

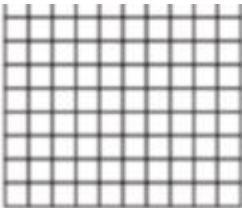
→ pages 160–162

1. $0.31 \rightarrow$  $\rightarrow 31\%$

$\frac{33}{100} \rightarrow$

| | | | |
|---|---|-----|-----|
| O | • | Tth | Hth |
| 0 | • | 3 | 3 |

 $\rightarrow 33\%$

$3\% \rightarrow$  $\rightarrow 0.03$

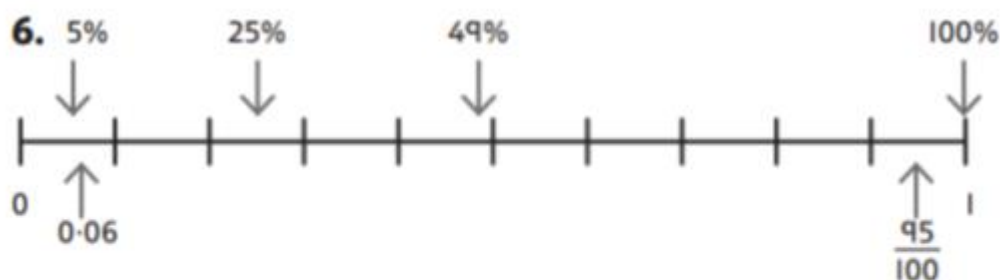
$13\% \rightarrow$  $\rightarrow 0.13$

2. $\frac{32}{100}$ as a decimal is 0.32
 $\frac{32}{100}$ as a percentage is 32%
 $\frac{32}{100}$ as a decimal is **32%**

3.

| Fraction | Decimal | Percentage |
|------------------|---------|------------|
| $\frac{48}{100}$ | 0.48 | 48% |
| $\frac{99}{100}$ | 0.99 | 99% |
| $\frac{1}{100}$ | 0.01 | 1% |

4. a) $\frac{53}{100} = 0.53 = 53\%$
 b) $0.35 = \frac{35}{100} = 35\%$
 c) $92\% = \frac{92}{100} = 0.92$
 d) $0.78 = \frac{78}{100} = 78\%$
5. 8%, 0.18, 0.8, $\frac{81}{100}$, 88%, 1



7. The first number line is the longest.
 The last number line is the shortest.
 Explanations will vary. For example, each interval on the first number line is worth 1% so it will take 100 intervals to make 1. Each interval on the second and third number lines represent 10% so it will take 10 intervals to make 1. The interval length on the third number line is slightly shorter than that of the second number line so the third number line will be shorter.

Reflect

Explanations will vary – ‘Per cent’ means ‘out of 100’ so $4\% = \frac{4}{100}$ and $14\% = \frac{14}{100}$. To then work out the decimal equivalents, $4 \div 100 = 0.04$ and $14 \div 100 = 0.14$.

→ pages 163–165

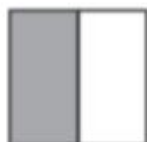
1. a) 40 squares shaded
 $40\% = \frac{40}{100}$
- b) 25 squares shaded
 $\frac{25}{100} = 25\% = 0.25$
- c) 7 squares shaded
 $0.07 = 7\%$
- d) 5 strips shaded
 $\frac{5}{10} = 50\%$
- e) 90 squares shaded
 $0.9 = 90\% = \frac{9}{10} = \frac{90}{100}$

2. Pairs matched:



25%

50%



1



$\frac{10}{10}$

0%



$\frac{0}{100}$

60%



$\frac{2}{10}$



0.2

3.

| Fraction | Decimal | Percentage |
|---------------------------------------|---------|------------|
| $\frac{4}{5}$ (or $\frac{8}{10}$) | 0.8 | 80% |
| $\frac{1}{10}$ (or $\frac{10}{100}$) | 0.1 | 10% |
| $\frac{1}{2}$ (or $\frac{5}{10}$) | 0.5 | 50% |
| $\frac{3}{4}$ | 0.75 | 75% |
| $\frac{90}{100}$ | 0.9 | 90% |

4. Yes – Luis achieved his target as 7 out of 14 would be 50%, he scored 7 out of 13 which means it is more than 50%.

5. a) 50% b) 80% c) 10%

6. a)

| × | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |
| 3 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 |
| 4 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 |
| 5 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
| 6 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 |
| 7 | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 |
| 8 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 |
| 9 | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 90 |
| 10 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

- b) 25% are odd. 75% are even.
- c) Explanations will vary. For example
Even × even = even Even × odd = even
Odd × even = even Odd × odd = odd
So, only 1 multiplication in every 4 will have an odd product, which means $\frac{1}{4}$ or 25% of the products will be odd. The rest, which is $\frac{3}{4}$ or 75% are even.

Reflect

Andy is incorrect. Explanations will vary, for example $0.8 = \frac{8}{10} = \frac{80}{100}$, so is the same as 80%.

End of unit check answers

| Q | A |
|---|---|
| 1 | A |
| 2 | C |
| 3 | C |
| 4 | D |
| 5 | D |
| 6 | $0.04, 13\% = \frac{130}{1,000}, \frac{2}{10}, 0.3, \frac{31}{100}$ |

My journal

1. Children should not agree with Aki as $\frac{1}{20} = \frac{5}{100} = 5\%$. Aki does not realise that the bigger the denominator, the smaller the part size and therefore the smaller the number (when the numerators are the same). 20% is actually $\frac{20}{100} = \frac{1}{5}$.
2. a) Richard scored 40 points on his test.
b) Children can write Richard's score as a fraction: $\frac{40}{50} = \frac{4}{5}$.
c) Ebo has given the decimal of 0.08, which is 8%. 80% is $\frac{80}{100}$, which is 0.8.

Power play

Look for children who look to the grid below to plan their next move. Listen to the explanations of their strategies, and note down any children who may need further support. Children should be encouraged to go deeper with this Power play by creating their own similar puzzle