Maths (week 3) Answers

Monday

Let's Practise (1)

14.8 rounds to 15

6.5 rounds to 7

Let's Practise (2)

14.56 rounds up to 15 (nearest whole number)
14.56 rounds up to 14.6 (nearest tenth)

6.45 rounds down to 6 (nearest whole number)
6.45 rounds up to 6.5 (nearest tenth)

Challenge 1:
Q1
I. 1 (b) 2 (c) 5 (d) 7 (e) 5

Q2
4.26 falls between 4 and 5 but is closer to 4 on the number line.
4.26 rounded to the nearest whole number is 4.

Q3
(a) Whole number = 9 Tenth = 9.3
(b) Whole number = 4 Tenth = 4.2
(c) Whole number = 6 Tenth = 5.6

Challenge 2:

Q1 (a) When rounding to the nearest tenth, there will be one digit after the decimal point.

II. 1.33 rounds to 1.3
1.34 rounds to 1.3
1.35 rounds to 1.4
1.36 rounds to 1.4
1.37 rounds to 1.4
4.03 rounds to 4.0
4.04 rounds to 4.0
4.05 rounds to 4.1
4.06 rounds to 4.1
4.07 rounds to 4.1

Q2: (b) 6.23 (The 3 in the hundredths column means you **round down** to 6.2)

III. 6.17 (The 7 in the hundredths column means you **round up** to 6.2)

Challenge 3:

Q1:

3.48kg = 3.5kg 1.42kg = 1.4kg 10.65kg = 10.7kg 1.03kg = 1.0kg or 1 kg

Q2:

Smallest: £7.01 Largest: £7.49

Q3. £5.92 (When rounded to the nearest whole number, the 9 means that you would round up to £6. However when rounding to the nearest tenth, the 2 in the hundredths column means you would round down to £5.90.

Tuesday

What are percentages?

50 parts per hundred

50%

Bar Models

3 parts are shaded. 3 out of 10 parts.

3/10 = 30/100 (multiply both numerator and denominator by 10)

3 out of 10 parts are shaded. 30% is shaded.

Let's Practise (1)

30%

70%

Let's Practise (2)

Q1: 60%

Q2: False it represents 49% because 49 parts out of 100 are shaded.

Q3: 60% because 60 parts out of 100 are shaded.

Q4: (a) 17% (b) 30% (c) 50% (d) 5%

Challenge 1:

1b. There are 24 parts out of a hundred shaded. This is 24%.

1c. There are 65 parts out of a hundred shaded. This is 65%.

2a. False. The grid represents 72%.

Challenge 2:

4a. A= 60% B= 63% C= 70%

4b. A = 50% B= 45% C= 40%

5a. A = 50% B = 47%

5b. A = 70% B= 76%

6. (a) 30 (b) 55 (c) 97 (d) 6 (e) 1

Challenge 3:

7a. C is the odd one out. It has 9 out of 20 squares shaded, which represents 45% (45 out of 100 if you multiply both numerator and denominator by 5).

A shows 24 out of 50 shaded squares, which is equivalent to 48 out of 100 or **48%**.

B shows 48 out of 100 shaded squares (**48%**) and **C** is **48%.**

8a. 27%, 14 parts per 50 (28%), 6 parts per 20 (30%), 4 parts out of 10 (40%), 51%, 11 parts out of 20 (55%)

9. Alfie is correct. All his diagrams represent 90%.

<u>Wednesday</u>

Let's Practise (1)

(a)

$\frac{47}{100}$ 0.47

(b) 16% 0.16

Video

32% = $\frac{32}{100}$ = 0.32 35% = $\frac{35}{100}$ = 0.35 48% = $\frac{48}{100}$ = 0.48

Let's Practise (2)

(a) 32% 0.32 (b) $\frac{11}{100}$ 11% 0.11

True or False?

(i) False (ii) True

Challenge 1:

1a A: 0.18, 18% B: 0.81, 81% C: 0.08, 8%

2a. The hundred square on the left is the odd one out. It represents 74%, whilst the other two diagrams represent 26%.

Challenge 2:

Q1:

(a) 50% **>** 5/100 (b) 25% **<** 50/100 (c) 14% **<** 41/100

(d) 40/100 **=** 40% (e) 70/100 **>** 7% (f) 82% **=** 82/100

Q2:

$\frac{4}{5}$ $\frac{50}{100}$ $\frac{70}{140}$

Challenge 3:

True or False?

(a) True (b) True

Q2: Caleb is NOT correct. 30/50 is equivalent to 60/100 which is the same as 60%. If class A took 26% and class B took 60%, they had 86% of glue sticks in total. Take that total away from 100% and you are left with 14%. So Caleb's class (class C) received only 14% of the glue sticks NOT 23% as Caleb thought.

Q3: 66% (100 -34 =66)

Extension:

(a) 21% (84/400 is divided by 4 to find the equivalent fraction of 21/100, which is 21%)
(b) 21/100
(c) 79% (100% - 21% = 79%)
(d) 0.79 as a decimal.

Thursday

Let's Practise

$\frac{3}{5} = \frac{6}{10} = \frac{60}{100} = 60\% = 0.6$

$\frac{2}{5} = \frac{4}{10} = \frac{40}{100} = 40\% = 0.4$

$\frac{1}{4}$ (x 25) = $\frac{25}{100} = 25\% = 0.25$

$\frac{2}{25}$ (x 4) = $\frac{8}{100} = 8\% = 0.08$

Challenge 1

1b. A. 0.25, 25% B. 0.05, 5% C. 0.5, 50%

2. (a) 0.1 (b) 0.45 (c) 0.7 (d) 0.9

3. (a) 100%, 50%, 20%, 10%

(b) 20/100 = 20%, 40/100 = 40%, 60/100 = 60%, 80/100 = 80%, 100/100 = 100%

Challenge 2

1. 32/100 2. 24/100 3. 36%
2. True or False?
   (i) True (ii) False (iii) True
3. 30/300 (10%) 22/200 (11%) 0.15 (15%) 0.5 (50%) 58/100 (58)

Challenge 3

1. Lucy has 60 sweets (200 ÷ 10 x 3) and Alice has 100 sweets (50% or half of 200 = 100)
   Therefore there are 40 sweets left in the jar (200- 160 =40)
   20% of sweets are left (40 out of 200 is equivalent to 20 out of 100 or 20%)
2. He saves 60%. (1/5 is equivalent to 20/100 or 20%. He spent 2/5 which is 20% x 2 =40%. Therefore 100%-40% = 60% left, he saves 60%)
3. Year 1: raised £56 out of £400, or 56/400 which is equivalent to 14/100 = 14%
   Year 2: raised £64 out of £400 or 64/400 which is equivalent to 16 /100 = 16%
   Year 3: raised £32 out of £400 or 32/400 which is equivalent to 8/100 = 8%
   Year 4: raised £96 out of £400 or 96/400 which is equivalent to 24/100 = 24%
   Year 5: raised £88 out of £400 or 88/400 which is equivalent to 22/100 = 22%
   Year 6: (Add up all the other money £56+ £64+£32+£96+£88= **£336,** then take that total from £400 **400-336 = 64** which gives you £64).
   Therefore Year 6 raised £64.