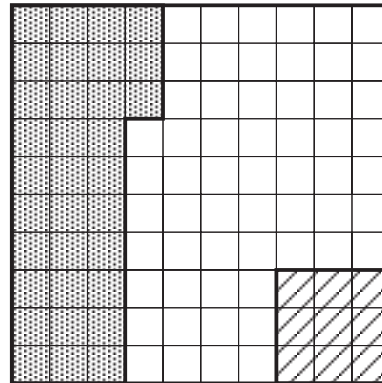## UNIT 17 *Arithmetic: Decimals, Fractions and Percentages*

Revision Test 17.1 (Standard)

1.   What percentage of this square is:

      (a)   shaded *grey,*

      (b)   shaded with *diagonal lines,*

      (c)   *not* shaded?

      (4 marks)

2.   Convert these decimals to fractions in their simplest form:

      (a)   0.7   (b)   0.09   (c)   0.13

      (d)   0.6   (e)   0.42   (f)   0.08

      (9 marks)

3.   Convert these fractions to decimals:

      (a) $\dfrac{3}{10}$ (b) $\dfrac{7}{100}$ (c) $\dfrac{3}{5}$

      (4 marks)

4.   Write these percentages as fractions in their simplest form:

      (a)   50%   (b)   40%   (c)   90%

      (5 marks)

5.   Write these numbers in *increasing* order:

      0.62,   0.602,   0.26,   0.206,   0.6

      (2 marks)

6.   Calculate:

      (a)   10% of £20,
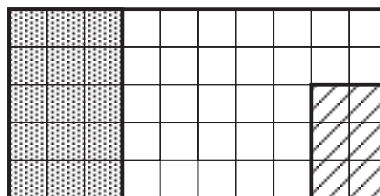
      (b)   2% of £300,

      (c)   20% of £80

      (6 marks)

UNIT 17 *Arithmetic: Decimals,*   **Revision Test 17.2**
Fractions and Percentages   (Academic)

1.   What percentage of this rectangle is:

    (a)   shaded *grey,*

    (b)   shaded with *diagonal lines,*

    (c)   *not* shaded?

(4 marks)

2.   Convert these decimals to fractions in their simplest form:

    (a)   0.42   (b)   0.018   (c)   0.72

(6 marks)

3.   Convert these fractions to decimals:

    (a) $\dfrac{3}{5}$ (b) $\dfrac{3}{20}$ (c) $\dfrac{13}{200}$

(6 marks)

4.   Write these percentages as fractions in their simplest form:

    (a)   25%   (b)   74%

(3 marks)

5.   In an election, 47% of the population voted. What percentage did *not* vote?

(2 marks)

6.   Calculate $0.7 - 0.04$, giving your answer as a decimal *and* as a fraction in its simplest form.

(3 marks)

7.   Calculate:

    (a)   20% of £80,
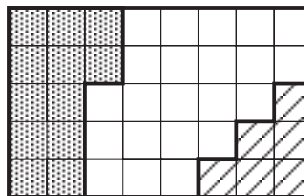
    (b)   35% of £40,

    (c)   70% of £65.

(6 marks)

UNIT 17 *Arithmetic: Decimals,*   **Revision Test 17.3**
Fractions and Percentages   (Express)

1.   What percentage of this rectangle is:

   (a)   shaded *grey,*

   (b)   shaded with *diagonal lines,*

   (c)   *not* shaded?

   (4 marks)

2.   Convert these decimals to fractions in their simplest form:

   (a)   0.024   (b)   0.0824

   (4 marks)

3.   Convert these fractions to decimals:

   (a) $\dfrac{4}{25}$ (b) $\dfrac{7}{40}$ (c) $\dfrac{4}{125}$

   (6 marks)

4.   Write these fractions as percentages:

   (a) $\dfrac{3}{20}$ (b) $\dfrac{3}{5}$

   (2 marks)

5.   Write these percentages as fractions in their simplest form:
   (a)   2%   (b)   36%

   (3 marks)

6.   Calculate:

   (a)   70% of £65,

   (b)   35% of 40 kg,

   (c)   85% of £90.

   (6 marks)

7.   People taking part in a survey were asked to taste 3 drinks and choose
      their favourite. Of these people, 28% chose drink A and 49% chose
      drink B. What percentage of the people chose drink C?

   (2 marks)

8.   Calculate $0.8 - 0.002,$ giving your answer as a decimal and as a fraction in
      its simplest form.

   (3 marks)

Revision Test 17.1 (Standard)   Answers

1. (a) 33%   B1

    (b) 9%   B1

    (d) $100 - 33 - 9 = 58\%$ B2   *(4 marks)*

2. (a) $\dfrac{7}{10}$ B1

    (b) $\dfrac{9}{100}$ B1

    (c) $\dfrac{13}{100}$ B1

    (d) $\dfrac{6}{10} = \dfrac{3}{5}$ M1 A1

    (e) $\dfrac{42}{100} = \dfrac{21}{50}$ M1 A1

    (f) $\dfrac{8}{100} = \dfrac{2}{25}$ M1 A1   *(9 marks)*

3. (a) 0.3   B1

    (b) 0.07   B1

    (c) 0.6   B2   *(4 marks)*

4. (a) $\dfrac{1}{2}$ B1

    (b) $\dfrac{40}{100} = \dfrac{2}{5}$ M1 A1

    (c) $\dfrac{90}{100} = \dfrac{9}{10}$ M1 A1   *(5 marks)*

5. 0.206, 0.26, 0.6, 0.602, 0.62   B1 B1   *(2 marks)*

6. (a) £2   B2

    (b) £6   B2

    (c) £16   B2   *(6 marks)*

                                                  (TOTAL MARKS 30)

Revision Test 17.2 (Academic)   Answers

1. (a)   30%   B1

    (b)   12%   B1

    (d) $100 - 30 - 12 = 58\%$ B2   *(4 marks)*

2. (a) $\dfrac{42}{100} = \dfrac{21}{50}$ M1 A1

    (b) $\dfrac{18}{1000} = \dfrac{9}{500}$ M1 A1

    (c) $\dfrac{72}{100} = \dfrac{18}{25}$ M1 A1   *(6 marks)*

3. (a) $\dfrac{6}{10} = 0.6$ B2

    (b) $\dfrac{15}{100} = 0.15$ B2

    (c) $\dfrac{65}{1000} = 0.065$ B2   *(6 marks)*

4. (a) $\dfrac{1}{4}$ B1

    (b) $\dfrac{74}{100} = \dfrac{37}{50}$ M1 A1   *(3 marks)*

5. $100 - 47 = 53\%$ M1 A1   *(2 marks)*

6. $0.66 = \dfrac{66}{100} = \dfrac{33}{50}$ B1 M1 A1   *(3 marks)*

7. (a)   £16   B2

    (b)   £14   B2

    (c)   £45.50   B2   *(6 marks)*

                                                                (TOTAL MARKS 30)

Revision Test 17.3 (Express)

Answers

1. (a) 30%   B1

   (b) 15%   B1

   (d) $100 - 30 - 15 = 55\%$ B2   *(4 marks)*

2. (a) $\dfrac{24}{1000} = \dfrac{3}{125}$ M1 A1

   (b) $\dfrac{824}{10\ 000} = \dfrac{103}{1250}$ M1 A1   *(4 marks)*

3. (a) $\dfrac{16}{100} = 0.16$ B2

   (b) $\dfrac{7}{40} = \dfrac{175}{1000} = 0.175$ B2

   (c) $\dfrac{4}{125} = \dfrac{32}{1000} = 0.032$ B2   *(6 marks)*

4. (a) 15%   B1

   (b) 60%   B1   *(2 marks)*

5. (a) $\dfrac{1}{50}$ B1

   (b) $\dfrac{36}{100} = \dfrac{9}{25}$ M1 A1   *(3 marks)*

6. (a) £45.50   B2

   (b) 14 kg   B2

   (c) £76.50   B2   *(6 marks)*

7. $100 - 49 - 28 = 23\%$ M1 A1   *(2 marks)*

8. $0.798 = \dfrac{798}{1000} = \dfrac{399}{500}$ B1 M1 A1   *(3 marks)*

(TOTAL MARKS 30)