Unit 6: Ordering

1. M/J 18/P12/Q3/a

0.05 –0.3 1.3 –1.2 0.2

(a) Arrange the five numbers in order, starting with the smallest. [1]

2. M/J 18/P11/Q3

Write these numbers in order of size, starting with the smallest.

$\frac{1}{3}$ 0.32 $\frac{15}{40}$ 0.3 $\frac{9}{31}$ [2]

3. M/J 18/P11/Q9

Find the integers that satisfy $1 < 3x + 5 \leqslant 11$. [2]

4. M/J 17/P12/Q9

(a) Write down all the integers that satisfy the inequality $-\frac{3}{2} \leqslant x < 2$. **[1]**

(b) Complete the following inequality with a fraction.

$\frac{3}{4} >$ ..... $> \frac{1}{2}$ **[1]**

(c) Write down an irrational value of n that satisfies this inequality.

$2 < n < 3$ **[1]**

5. O/N 16/P12/Q4/b

(a) Arrange the following in order, starting with the smallest.

74% −0.7 $0.\dot{7}$ $-\frac{3}{4}$ **[1]**

6. O/N 16/P11/Q3/b

(a) Arrange these values in order of size, starting with the smallest.

0.38 $\frac{9}{25}$ 0.4 $\frac{7}{20}$ **[1]**

7. M/J 16/P12/Q1/a

(a) Evaluate $(2.05 + 1.4) \times 0.2$. **[1]**

8. M/J 16/P12/Q13/a

(a) Write these values in order of size, starting with the smallest.

2^5 5^2 $\sqrt[3]{1000}$ 27^0 **[1]**

9. M/J 15/P12/Q2

Write these numbers in order of size, starting with the smallest.

$\frac{13}{20}$ 0.7 $\frac{7}{12}$ 0.64 $\frac{5}{8}$ **[2]**

10. O/N 13/P12/Q4/b

(a) Arrange these values in order, starting with the smallest.

$\frac{4}{9}$ $\frac{2}{5}$ 44% **[1]**

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11. O/N 13/P11/Q2/b

(a) Arrange these values in order of size, starting with the smallest.

22% $\quad \frac{2}{9} \quad$ 0.2 **[1]**

12. O/N 12/P12/Q5

Arrange these numbers in order, starting with the smallest.

$\frac{3}{4} \quad 0 \quad -1 \quad -\frac{17}{20} \quad -\frac{4}{5}$ **[2]**

13. O/N 12/P11/Q4

Arrange these lengths in order of size, starting with the smallest.

2300 mm $\quad$ 220 cm $\quad$ 0.021 km $\quad$ $2\frac{1}{4}$ m **[2]**

14. O/N 11/P12/Q2/b

(a) Write the following times in order of size, starting with the smallest.

6 500 seconds $\quad$ 110 minutes $\quad$ $1\frac{3}{4}$ hours **[1]**

15. O/N 11/P11/Q3/a

(a) Write the following numbers in order of size, starting with the smallest.

$0.67 \quad \frac{7}{9} \quad \frac{2}{3} \quad 66\,\%$ **[1]**

16. O/N 09/P1/Q3

Arrange these values in order of size, starting with the smallest.

$\frac{9}{20} \quad 0.39 \quad 46\% \quad \frac{2}{5}$ **[2]**

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Answers Section

1. M/J 18/P12/Q3/a

(a) -1.2 -0.3 0.05 0.2 1.3 **1**

2. M/J 18/P11/Q3

$\frac{9}{31}$ 0.3 0.32 $\frac{1}{3}$ $\frac{15}{40}$ **2**

3. M/J 18/P11/Q9

$-1, 0, 1, 2$ **2**

4. M/J 17/P12/Q9

(a) $-1, 0, 1$ **1**

(b) Correct fraction **1**

(c) Irrational number between 2 and 3 **1**

5. O/N 16/P12/Q4/b

(a) $-\frac{3}{4}$ -0.7 74% $0.\dot{7}$ **1**

6. O/N 16/P11/Q3/b

(a) $\frac{7}{20}$ $\frac{9}{25}$ 0.38 0.4 **1**

7. M/J 16/P12/Q1/a

(a) 0.69 **1**

8. M/J 16/P12/Q13/a

(a) 27^0, $\sqrt[3]{1000}$, 5^2, 2^5 **1**

9. M/J 15/P12/Q2

$\frac{7}{12}$ $\frac{5}{8}$ 0.64 $\frac{13}{20}$ 0.7 **2**

10. O/N 13/P12/Q4/b

(a) $\frac{2}{5}$ 44% $\frac{4}{9}$ **1**

11. O/N 13/P11/Q2/b

(a) 0.2 22% $\frac{2}{9}$ **1**

12. O/N 12/P12/Q5

$-1, -\frac{17}{20}, -\frac{4}{5}, 0, \frac{3}{4}$ **2**

13. O/N 12/P11/Q4

220 $2\frac{1}{4}$ 2300 0.021 **2**

14. O/N 11/P12/Q2/b

(a) $1\frac{3}{4}$ (hours), 6 500 (seconds), 110 (minutes) **1**

15. O/N 11/P11/Q3/a

(a) $66(\%)$ $\frac{2}{3}$ 0.67 $\frac{7}{9}$ **1**

16. O/N 09/P1/Q3

$0.39, \frac{2}{5}, \frac{9}{20}, 46\%$ **2**

Accept correct equivalent values, e.g. 0.39, 0.4, 0.45, 46%

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