

1.13 End of Unit Test

SECTION A

1. $\mathbb{Z}, \mathbb{N}, \mathbb{Q}, \mathbb{Q}$
2. a) $120 = 2^3 \cdot 3 \cdot 5$ (5 factors)
b) 24
3. a) $\frac{4}{11}$
b) 0.481
4. 600, 900, 1200
5. a) 14600
b) 22.80
c) 604
6. $V = 228m^3A = 248m^2$
7. $P = 0.00068mA = 0.000000012m^2$
8. 0.4% of 50, $8^{-\frac{2}{3}}$, $\sqrt[3]{0.027}$, $\frac{\frac{2}{3}-\frac{1}{4}}{\frac{5}{6}+\frac{1}{5}}$, $5.23 \cdot 10^{-1}$
9. a) 2^8
b) $64b^{15}$

SECTION B

1. a) \$67556.41688
b) 18 years
2. 20%
3. 433.13 PLN (2 d.p.)
4. a) $A \cap B = A = \{1, 2, 6, 7\}$
b) $A \cup C = \{1, 2\}$
c) $C' = \{6, 7, 8, 9\}$
5. $6 + 7\sqrt{2}$
6. a) 56284.01691
b) 2042
7. a) $13.\overline{3}\frac{km}{h}$
b) 1h
c) $20\frac{km}{h}$
8. 7.5 Ω
9. $9.195 \cdot 10^{-5}$

10. a)

b) $x = 2$

c) $10 + 1 + 5 = 16$