

Exercise 2015-8 EA-00004(2)

NO CALCULATOR MAY BE USED IN THIS EXERCISE!

- (1) Is 16 a multiple or a factor of 4?
- (2) (a) Determine the prime factors of 48 and 12.
(b) Hence, determine: $\sqrt{48 \times 12}$ without using a calculator.
- (3) Write down all the even multiples of 7, up to 50.
- (4) What is the difference between a prime number and a composite number?
- (5) $A = \{1 ; 2 ; 3 ; 4 ; 5 ; 6 ; 12 ; 18 ; 24\}$
- (a) Which elements of A is prime numbers?
(b) All elements of A are factors of 24. Is this statement true? If not, which of the elements of A are not factors of 24?
(c) All the prime factors of 10 is elements of A. True or false?
- (6) Calculate, without using a calculator. Show all calculations.

(a) $\sqrt{64 + 6^2}$

(b) $[(3 - 4)^2 + 2]^2$

(c) $\sqrt[3]{3\,375}$

(d) $5^3 - \sqrt[3]{125}$

(e) $0.3^3 + 7^2$

(f) $(4 - 3)^2(3 - 2)^2$

- (7) Which of the following numbers are Rational numbers?

$\frac{-6}{11}$; $\sqrt{10}$; 0,234 ; 0 ; $\sqrt[3]{8}$; $4.\dot{3}$