

學友社 2015／16 年香港模擬文憑試
Hok Yau Club Hong Kong Mock Examination 2015/16
數學 必修部分 試卷一
Mathematics (Compulsory Part) Paper 1

1.
$$= \frac{y^{12}}{x^{17}}$$

2.
$$n = \frac{-m-1}{m-1}$$

3. $n = 30$

4. (a) $= 1890 \text{ (kg)}$

(b) 由於上捨入的總重量 $= 1890 \text{ kg} < 1900 \text{ kg}$

因此原有產品的總重量 $< 1900 \text{ kg}$

The estimated total weight $= 1890 \text{ kg} < 1900 \text{ kg}$

Note that the actual total weight is less than 1900 kg

5. (a) $= 4(x-2y)(x+y)$

(b) $= (x-2y)(4x+4y-3)$

6. (a) $x \geq -\frac{3}{2}$

(b) 5

7. $\$120$

8. (a) $= 45^\circ$

(b) $\triangle AEF$ 不是一等腰三角形

$\triangle AEF$ is not an isosceles triangle

9. (a) $P' : (3, 5) ; Q' : (k, -1)$

(b) $k = 9$

10. (a) \$19000
- (b) \$60000
11. (a) $a = 38$; $b = 93$
- (b)(i) = 54 (分)(marks)
- (b)(ii) 不同意班長的宣稱
the claim is disagreed
12. (a) $a = 2$; $b = -2$; $c = 4$
- (b) $= (x-2)(x-3)(2x+1)$
13. (a) $(x-2)^2 + y^2 = 25$
- (b)(i) 同意該宣稱
the claim is agreed
- (b)(ii) = 49 : 51
14. (a) $r = 18$
- (b) $= 3348\pi$ (cm²)
- (c) 同意該宣稱
the claim is agreed
15. (a) $x = 7$; 標準差/SD ≈ 6.16 (kg)
- (b) 嘉琪不是這些學生中最輕的兩名之一
Kelly is not one of the two lightest students
16. (a) $= \frac{3}{14}$

(b) $= \frac{3}{7}$

17. (a) 方程 $px^2 + qx + r = 0$ 不存在實數根
the equation $px^2 + qx + r = 0$ has no real roots

(b) $\alpha = -\frac{1}{2} + \frac{\sqrt{3}}{2}i$

18. (a)(i) $a = 3$

(a)(ii) $(k, k^2 + 2)$

- (b) 該宣稱不正確
the claim is disagreed

19. (a) $\approx 23.0 \text{ (m}^2\text{)}$

- (b) 投影面積小於 (a) 所求得的面積
the area of the shadow is less than the area obtained in (a)

(c) ≈ 2.24