

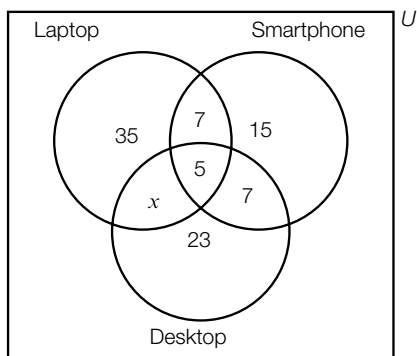
## Sample Paper 1

- 66 900 km
    - 67 000 km
  - $1.53 \times 10^{15} \text{ km}^3$  (3 s.f.)
- $3x^2 - 2x - 4$
  - $-\frac{1}{3}$  and 1
- If Dad does not buy her an iPad then he buys her a laptop.
    - If Dad does not buy her a laptop then he buys her an iPad and Mum buys her a mobile phone.
  -

$p$	$q$	$\neg p$	$\neg q$	$p \Rightarrow \neg q$	$\neg p \Rightarrow q$	$(p \Rightarrow \neg q) \vee (\neg p \Rightarrow q)$
T	T	F	F	F	T	T
T	F	F	T	T	T	T
F	T	T	F	T	T	T
F	F	T	T	T	F	T

- 39 200
  - Median = 34 500,  $Q_1 = 32\,000$ ,  $Q_3 = 46\,000$ , IQR = 14 000
  - 10 157
- (2, 4)
  - $x + 7y - 30 = 0$
- 56°F
  - 11°F
  - 25
  - 74°F
- 19 060
  - 21 805
  - 19.8 (20th month)
- $c + v = 53$
  - $40c + 70v = 2570$
  - 38 CDs, 15 DVDs
- 130–150 g
    - 110–130 g
  - 126 g
  - 23.7 g (3 s.f.)
- The level of activity is independent of gender, i.e. it is the same for boys and girls.
  - 2
  - 10.7 (3 s.f.)
  - Reject  $H_0$  since the  $\chi^2$  statistic is higher than the critical value.
- $a = -1.63$  (3 s.f.),  $b = 5$
  - $y = -1$
  - 30.2 (3 s.f.)
- $10\sqrt{61} = 78.1 \text{ cm}$  (3 s.f.)
    - $10\sqrt{77} = 87.7 \text{ cm}$  (3 s.f.)
  - 12.8° (3 s.f.)
- 6
  - 7
    - 12
  - 187

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- 8
- \$427.00
  - \$375.19