

- 1 A school has 220 boys and 280 girls.

- (a) Find the ratio of boys to girls, in its simplest form.

$$\frac{220 : 280}{\div 20} \\ = 11 : 14$$

Answer(a) 11 : 14 [1]

- (b) The ratio of students to teachers is 10 : 1.
Find the number of teachers.

$$\frac{1}{10} \times (220 + 280) \\ = \frac{1}{10} \times 500 \\ = 50$$

Answer(b) 50 [2]

- (c) There are 21 students on the school's committee.
The ratio of boys to girls is 3 : 4.
Find the number of girls on the committee.

$$\frac{4}{3+4} \times 21 = \frac{4}{7} \times 21 \\ = 12$$

Answer(c) 12 [2]

- (d) The committee organises a disco and sells tickets.
35% of the school's students each buy a ticket. Each ticket costs \$1.60.
Calculate the total amount received from selling the tickets.

$$\frac{35}{100} \times (220 + 280) \quad 175 \times \$1.60 = \$280 \\ = \frac{35}{100} \times 500 \\ = 175$$

Answer(d) \$ 280 [3]

- (e) The cost of running the disco is \$264.
This is an increase of 10% on the cost of running last year's disco.
Calculate the cost of running last year's disco.

last year	increase	this year
100%	10%	110%
x		\$264

$$x = \frac{100\%}{110\%} \times \$264 \\ = \$240$$

Answer(e) \$ 240 [2]