

SMART EXAM RESOURCES

TOPIC : NUMBERS

SUB-TOPIC: EXPRESSING A QUANTITY AS A PERCENTAGE OF ANOTHER

SET-1-QP-MS

1

A house was built in 1985 and cost \$62 000.
It was sold in 2003 for \$310 000.

- (a) Work out the 1985 price as a percentage of the 2003 price.

Answer (a) % [2]

- (b) Calculate the percentage increase in the price from 1985 to 2003.

Answer (b) % [2]

MARK SCHEME:

| | | | |
|-----|------|----|---|
| (a) | 20% | 2* | M1 for $\frac{62000}{310000} \times 100$ |
| (b) | 400% | 2* | M1 for $\frac{248000}{62000} \times 100$ |

2

Lin scored 18 marks in a test and Jon scored 12 marks.
Calculate Lin's mark as a percentage of Jon's mark.

Answer

% [2]

MARK SCHEME:

| | | |
|-----|---|--------------------------------------|
| 150 | 2 | M1 $\frac{18}{12} \times 100$ |
|-----|---|--------------------------------------|

3 Work out 85 cents as a percentage of \$2.03 .

..... % [1]

MARK SCHEME:

| | |
|---------------|----------|
| 41.9 or 41.87 | 1 |
|---------------|----------|

4 Work out \$1.20 as a percentage of \$16.

.....% [1]

MARK SCHEME:

| | |
|--------|----------|
| 7.5 oe | 1 |
|--------|----------|

- 5 In 1970 the population of China was 8.2×10^8 .
In 2007 the population of China was 1.322×10^9 .
Calculate the population in 2007 as a percentage of the population in 1970.

Answer % [2]

MARK SCHEME:

| | | |
|-----|---|--|
| 161 | 2 | M1 $1.322 \times 10^9 / 8.2 \times 10^8 (\times 100)$ |
|-----|---|--|

6

In 1977 the population of China was 9.5×10^8 .
In 2007 the population of China was 1.322×10^9 .
Calculate the population in 2007 as a percentage of the population in 1977.

Answer % [2]

MARK SCHEME:

| | | |
|-----|---|--|
| 139 | 2 | M1 $1.322 \times 10^9 / 9.5 \times 10^8 (\times 100)$ |
|-----|---|--|

7 Work out 72 cents as a percentage of 83 cents.

Answer % [1]

MARK SCHEME:

| | |
|------------------------|----------|
| 86.7 or 86.74 to 86.75 | 1 |
|------------------------|----------|

8 Write 55 g as a percentage of 2.2 kg.

.....% [2]

MARK SCHEME:

| | | |
|-----|---|--|
| 2.5 | 2 | B1 for 2200 or 0.055 seen or SC1 for answer figs 25 |
|-----|---|--|

9 Write 26 g as a percentage of 208 g

..... % [1]

MARK SCHEME:

| | |
|------|----------|
| 12.5 | 1 |
|------|----------|