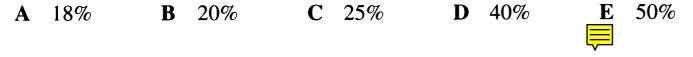
UNIT 2 : Percentages

Level 1

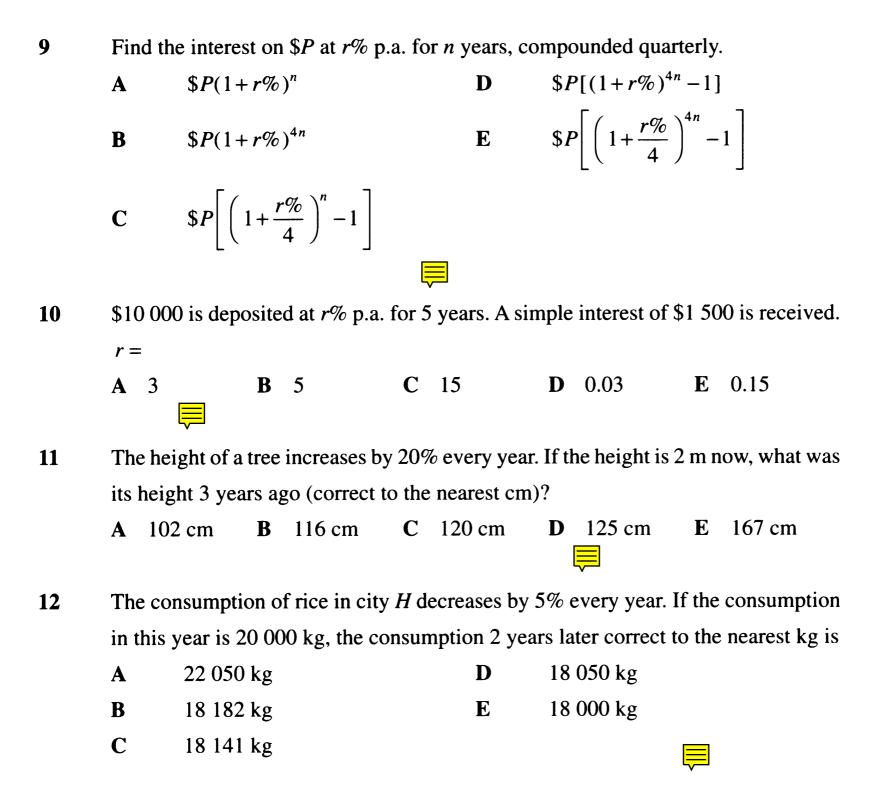
8

If A is 25% more than B, B is less than A by 1 **B** 16.7% **C** $17\frac{1}{2}\%$ **D** 20% **E** 25% A 15%

- In a school, $\frac{1}{6}$ of the students go to school by MTR, $\frac{1}{3}$ by bus and the rest on foot. 2 What percentage of students go to school on foot? **A** $33\frac{1}{3}\%$ **B** $41\frac{2}{3}\%$ **C** 50% **D** $58\frac{1}{3}\%$ **E** $83\frac{1}{3}\%$ When a number is increased by 20%, its value increases by 4. The original value of 3 the number is **B** 8 **C** 16 **D** 20 **E** 24 **A** 5
- In a class, 60% are boys and 40% are girls. 70% of the boys and 50% of the girls 4 wear glasses. Find the percentage of students in the class wearing glasses.
- **B** 60% **C** 58% A 62% **E** 50% **D** 55% x% of 30 is the same as (x+10)% of 20. x =5 **D** 50 20 **E** 60 **C** 30 **A** 10 B After a discount of 15% is given, the selling price of an article is \$170. Find the 6 marked price of the article. **D** \$147.8 \$144.5 **C** \$195.5 A \$314.5 \$200 E B A radio costing \$200 is sold at \$250. Find the percentage profit. 7



- The cost of an article is \$400 and is marked \$500. After a discount of x% is given,
 - a loss of 10% is made on selling the article. x =
 - **B** 12.5 **C** 18 **D** 20 **E** 28 **A** 11.25



Level 2

13 The population of a city increases by 5% in the first year, decreases by 5% in the second year, increases by 5% in the third year, and decreases by 5% in the fourth year. The percentage change in population in this period is

Α	5% (increase)	D	0.5% (decrease)
B	0.5% (increase)	Ε	5% (decrease)
С	0%		

14 In a class of 40 students, x% of the students are boys. If 8 boys go out and 8 girls

come in, then x% of the students are girls. x =

A 40 **B** 42 **C** 50 **D** 58 **E** 60



- The cost of producing an article is \$50, in which \$30 is for material and \$20 is for 15 labour charge. If the cost of material decreases by 20% and the labour charge increases by 20%,
 - the total cost decreases by 4%. A
 - the total cost decreases by $3\frac{1}{3}\%$. B
 - С the total cost remains unchanged.
 - the total cost increases by $3\frac{1}{3}\%$. D
 - E the total cost increases by 4%.
- Mr Leung bought 100 apples. The cost can be covered if 60 of them are sold. Find 16 the percentage profit if all apples are sold.
 - **B** $66\frac{2}{3}\%$ **C** 60% **D** 40% **E** $33\frac{1}{3}\%$ **A** 80%
- A book costs \$50 and is marked \$70. Find the maximum percentage discount to be 17 given so that it is not a loss when the book is sold.

A
$$11\frac{3}{7}\%$$
 B 15% **C** $28\frac{4}{7}\%$ **D** 35% **E** 40%

- 18 Find the difference between simple and compound interest (compounded yearly) if \$10 000 is deposited at 6% p.a. for 3 years.
 - **D** \$110.16 **A** \$0 **B** \$10.16 **E** \$210.16 **C** \$60
- What simple interest rate will give the same interest as \$10 000 being compounded 19 half-yearly at 8% p.a. for 2 years?

A 1.7% p.a. **B** 5.8% p.a. **C** 8.5% p.a. **D** 11.7% p.a. **E** 17% p.a.
$$\blacksquare$$

- The value of a machine depreciates by 20% every 2 years. If its price is \$5 000 now, 20 its price 6 years later is
 - **C** \$2 000 \$1 310.72 **B** \$1 500 **D** \$2 560 \$2 893.52 E A
- The sides of a square are increased by 25%. Its area is increased by 21
- - C 37.5% D 50% E 56.25% **A** 12.5% **B** 25%

22 When the base of a triangle increases by 50% and the height decreases by x%, the area increases by 10%. x =

A
$$33\frac{1}{3}$$
 B $26\frac{2}{3}$ **C** 30 **D** $33\frac{1}{3}$ **E** 40

23 In a 5 000 m race, Peter's speed is 20% faster than John's, the time Peter needs to complete the race is less than that of John by

A
$$16\frac{2}{3}\%$$
 B 18% **C** 20% **D** 25% **E** $83\frac{1}{3}\%$