

REGULAR QUIZ 05

Form 1 Regular Course
Percentage

Part A – MC (@3 marks)

1.	B	
2.	B	$8000 \times 80\% \times (1 - 10\%) = 5760$
3.	B	<p>Let n be the number of students.</p> $n \times (1 - 60\%) \times 20\% + n \times 60\% \times (1 - 60\%) = 400$ $0.08n + 0.24n = 400$ $n = 1250$
4.	B	<p>Let x and y be the length and width of rectangle.</p> <p>Percentage change</p> $= \frac{[x(1 + 15\%)][y(1 - 20\%)] - xy}{xy} \times 100\%$ $= \frac{(1.15x)(0.8y) - xy}{xy} \times 100\%$ $= \frac{0.92xy - xy}{xy} \times 100\%$ $= \frac{-0.08xy}{xy} \times 100\%$ $= -8\%$
5.	D	<p>Let the height of HY Lau be h.</p> <p>The required percentage</p> $= \frac{(1 + 10\%)h - (1 - 20\%)h}{(1 - 20\%)h} \times 100\%$ $= \frac{1.1h - 0.8h}{0.8h} \times 100\%$ $= \frac{0.3h}{0.8h} \times 100\%$ $= 37.5\%$
6.	C	<p>Let $\\$c$ be the cost price of a chair.</p> <p>Then the selling price of a chair $= \frac{18}{12}h = 1.5h$</p> <p>The profit percentage $\frac{1.5h - h}{h} \times 100\% = 50\%$</p>

7.	B	The total selling price $= 4 \times (1 + 20\%) \times 30 + 4 \times (1 - 20\%) \times [50 \times (1 - 10\%) - 30]$ $= \$192$ He lost $= 4 \times 50 - 192 = \$8$
8.	A	The discount percentage $= \frac{10 - 7}{10} \times 100\% = 30\%$
9.	B	$x(1 + 40\%)(1 - 10\%) - x = 65$ $(1.4)(0.9)x - x = 65$ $1.26x - x = 65$ $0.26x = 65$ $x = 250$
10.	B	Loss percentage $= 37.5\% - 25\% = 12.5\%$

1. B 2. B 3. B 4. B 5. D
6. C 7. B 8. A 9. B 10. B

Part B – Short Question (20 marks)

1. (3 marks)

$$1800 \times 40\% + 1800 \times 60\% \times 25\% \quad 1M + 1M$$

$$= \$990 \quad 1A$$

Peter gets \$990.

2. (4 marks)

(a) Let n be the total number of students.

$$n \times (1 - 60\%) = 600 \quad 1M$$

The total number of students is 1500. 1A

(b) The percentage of lazy students

$$= \frac{600 \times 40\% + 900 \times 30\%}{1500} \times 100\% \quad 1M$$

$$= 34\% \quad 1A$$

3. (6 marks)

(a) Let $\$C$ be the price Alicia pay for.

$$C \times 20\% = 360 \quad 1M$$

$$C = 1800$$

Alicia paid \$1800. 1A

(b) $(1800 + 360) \times 75\%$ 1M

$$= \$1620 \quad 1A$$

Bianca earned \$1620.

(c) The profit percentage

$$= \frac{360 + 1620}{1800} \times 100\% \quad 1M$$

$$= 110\% \quad 1A$$

4. (7 marks)

(a) The selling price

$$= 1500 \times (1 - 20\%) = \$1200 \quad 1M$$

Let $\$C$ be the cost price.

$$C \times (1 + 50\%) = 1200 \quad 1M$$

$$C = 800$$

The cost price = \$800. 1A

(b)(i) The new cost

$$= 800 \times (1 - 20\%) = \$640$$

The new profit percentage

$$= \frac{1200 - 640}{640} \times 100\% \quad 1M$$

$$= 87.5\% \quad 1A$$

(ii) The discount percentage

$$= \frac{1500 - 640 \times (1 + 50\%)}{1500} \times 100\% \quad 1M$$

$$= 36\% \quad 1A$$