

Math for Business pre-final exam Quiz

30
Questions

1. What fraction represents 25%?

- 40/41 ☒ A 1/4
0/41 ☐ B 1/5
1/41 ☐ C 25/10
0/41 ☐ D 5/4

2. 20% of £1000 equals,

- 38/41 ☒ A £200
0/41 ☐ B £20
3/41 ☐ C £800
0/41 ☐ D £1200

3. If a price increases by 12%, the appropriate scale factor is:

- 23/40 ☐ A 0.12
14/40 ☒ B 1.12
0/40 ☐ C 1.2
3/40 ☐ D 0.88

4. A good originally priced at £78 rises by 9%. The new price is:

- 2/40 ☐ A £87
37/40 ☒ B £85.02
1/40 ☐ C £70.98
0/40 ☐ D £1068

5. To calculate the original price from a final price after a 9% rise, you should:

- 16/39 ☐ A Multiply by 1.09
23/39 ☒ B Divide by 1.09
0/39 ☐ C Subtract 9
0/39 ☐ D Add 9

6. Which of the following represents a 20% decrease?

- 13/39 ☐ A Scale factor 1.20
1/39 ☐ B Scale factor 1.80
1/39 ☐ C Scale factor 20
24/39 ☒ D Scale factor 0.80

7. If an investment depreciates by 25% in a year, its value next year will be:

- 5/38 ☐ A 1.25 times original
4/38 ☐ B 25% of original
28/38 ☒ C 0.75 times original
1/38 ☐ D 1.75 times original

8. Marginal propensity to save (MPS) plus marginal propensity to consume (MPC) equals:

- 4/38 ☐ A 0
33/38 ☒ B 1
1/38 ☐ C MPC
0/38 ☐ D MPS

9. Which of the following is correct for MPC?

- 27/38 ☒ A $0 < \text{MPC} < 1$
0/38 ☐ B $\text{MPC} < 0$
1/38 ☐ C $\text{MPC} > 1$
10/38 ☐ D $\text{MPC} = 1$

10. Which formula gives simple interest?

- 22/38 ☐ A $P(1+r)^n$
14/38 ☒ B Prt
1/38 ☐ C Pe^{rt}
1/38 ☐ D $P+r$

11. Calculate simple interest on \$500 at 10% for 6 months.

- 29/38 ☒ A \$25
7/38 ☐ B \$50
2/38 ☐ C \$500
0/38 ☐ D \$5

12. A loan of \$800 at 9% for 4 months gives interest of:

- 33/38 ☒ A \$24
1/38 ☐ B \$9
1/38 ☐ C \$27
3/38 ☐ D \$80

13. Compound interest occurs when:

- 2/38 ☐ A Interest is paid only once
30/38 ☒ B Interest earns further interest
4/38 ☐ C Prices decrease
2/38 ☐ D Taxes are removed

14. \$1,000 invested at 8% compounded quarterly for 1 year becomes approximately:

- 5/38 ☐ A \$1,020
21/38 ☒ B \$1,082
12/38 ☐ C \$1,080
0/38 ☐ D \$800

15. The amount after 5 years for discrete compounding is calculated by:

- 1/38 ☐ A Simple interest
35/38 ☒ B $P(1+r)^n$
0/38 ☐ C $P/(1+r)^n$
2/38 ☐ D Pn

16. If \$2,000 is borrowed at 12% compounded annually for 2 years, the total amount due is:

- 0/37 ☐ A 2000×1.12
35/37 ☒ B 2000×1.12^2
0/37 ☐ C 2000×0.12
2/37 ☐ D 2000×2

17. The index number in the base year is always:

- 3/37 **A** Equal to inflation
- 26/37 **B** Set to 100
- 5/37 **C** Set to MPC
- 3/37 **D** Negative

18. Household spending rises from 697.2 to 723.7. The index number (base 697.2) is approximately:

- 4/37 **A** 98.5
- 25/37 **B** 103.8
- 2/37 **C** 100
- 6/37 **D** 105.3

19. Nominal data refer to:

- 8/37 **A** Inflation-adjusted values
- 5/37 **B** Real GDP only
- 2/37 **C** Discounted values
- 22/37 **D** Raw values at prevailing prices

20. Real data are obtained from nominal values by:

- 5/36 **A** Adding inflation
- 23/36 **B** Dividing by appropriate scale factors
- 2/36 **C** Ignoring inflation
- 6/36 **D** Multiplying by MPC

21. The value of 1007 compared to 950 represents approximately:

- 1/36 **A** 12% rise
- 9/36 **B** 5% decrease
- 1/36 **C** 8% decrease
- 25/36 **D** 6% rise

22. A \$10,000 T-bill bought for \$9,693.78 for 180 days yields annual rate of approximately:

- 1/36 **A** 12%
- 22/36 **B** 7%
- 11/36 **C** 3.5%
- 2/36 **D** 9%

23. Continuous compounding uses the formula:

10/36 **A** $P(1+r)^n$

0/36 **B** Prt

10/36 **C** $FV/(1+r)^n$

16/36 **D** Pe^{rt}

24. £1,000 invested at 12% continuously compounded for 2 years is:

8/36 **A** 1000×1.12^2

19/36 **B** $1000e^{0.12 \times 2}$

7/36 **C** $1000/(1.12)^2$

2/36 **D** $1000 \times 0.12 \times 2$

25. To move backward in time with inflation adjustments, you should:

6/36 **A** Multiply by scale factor

22/36 **B** Divide by scale factor

8/36 **C** Add inflation rate

0/36 **D** Ignore brackets

26. Which basket is used for calculating annual inflation?

7/36 **A** Nominal basket

23/36 **B** Goods and services reflecting household patterns

6/36 **C** MPC basket

0/36 **D** Only luxury goods

27. If a firm plans to repay £500 in 5 years and the discount rate is 6% compounded semi-annually, the present value is about:

3/35 **A** £500

21/35 **B** £373

8/35 **C** £370

3/35 **D** £464

28. A car priced at £43,000 depreciates by 25%. Next year it will be worth:

2/35 **A** £10,750

29/35 **B** £32,250

2/35 **C** £47,000

2/35 **D** £60,800

29. Overall percentage change after successive increases of 32% and 10% is found by:

5/35 **A** Adding 42%

2/35 **B** Subtracting 10

5/35 **C** Using simple interest

23/35 **D** Multiplying 1.32 and 1.1

30. If inflation is 10.7% in 1992, nominal price £93,000 adjusted to 1991 prices is approximately:

6/35 **A** $93,000 \times 1.071$

24/35 **B** $93,000 / 1.071$

4/35 **C** $93,000 \times 0.12$

1/35 **D** $93,000 / 0.12$