

Name: \_\_\_\_\_  
Student ID: \_\_\_\_\_

## Test 2

This test is graded out of 60 marks. No books, notes or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

**Question 1.** (1 mark each) Evaluate and round solutions to two decimal places.

- a.  $\sqrt[4]{234}$
- b.  $1.0292^{\frac{49}{9}}$
- c.  $\ln 231$
- d.  $-1^0$
- e.  $(-1)^0$

**Question 2.** (3 marks) Solve for  $x$ .

$$\frac{4}{3}\left(x - \frac{1}{2}\right) - \left(x - \frac{1}{3}\right) = \frac{1}{5} + 10x$$

**Question 3.** (3 marks) Expand and simplify.

$$(x - 2)^2 - (x - 3)(x - 4)$$

**Question 4.** (3 marks) Simplify.

$$\frac{(3x^2y^{-3})^4}{(2x^{\frac{1}{2}}y^5)^{-2}}$$

**Question 5.** (3 marks) Isolate  $i$ .

$$FV = PV(1 + i)^n$$

**Question 6.** (4 marks) Karl has a gross salary for the week of \$538.38. He receives a base salary of \$300 and has 7.2% commission on his net sales with a quota of \$3 000. What were his net sales for the week?

**Question 7.** (2 marks) The City of Atwater has announced that this year's mill rate has been set at 55.38. Noam has a property assessed at \$320 000, what amount will he pay this year in property taxes?

**Question 8.** (3 marks) Solve for x.

$$3 : 8 = 21 : x$$

**Question 9.** (4 marks) The component cost to make an OGG Vorbis player is four-seventh of the total cost, and labour is one-third of the component cost. If cost of labour is \$11 what is the total cost of the OGG Vorbis player.

**Question 10.** (2 marks) What is 35% of \$233?

**Question 11.** (2 marks) \$300 is 15% of what amount?

**Question 12.** (2 marks) If \$124.24 is the amount after GST, what was the amount before GST?

**Question 13.** (4 marks) A computer is sold to a retailer for \$399.99 less 25%, 15%, 5%. What is the net price? What is the total discount? What is the single rate of discount?

**Question 14.** (4 marks) An invoice for \$1 000 dated June 13<sup>th</sup> with terms 5/15 E.O.M. is received with the goods on June 17<sup>th</sup>. What amount must be paid on July 11<sup>th</sup> to reduce the debt to \$500.

**Question 15.** (4 marks)

The Pink Book Store sells the book Das Kapital for \$43.33. The markup is 10% of the cost. What is the cost of the book? What is the rate of markup based on selling price?

**Question 16.** (6 marks)

The Kunming DVD Store paid \$0.55 for a DVD. Expenses are 33% of selling price and the required profit is 11% of the selling price. The older DVDs are marked down 30%. What is the regular selling price of a DVD? What is the selling price of a marked down DVD? What is the operating loss or profit on the older DVDs?

**Question 17.** (6 marks)

The local camera store paid \$1 700.00 for a Nikon lens less 30%, 10% and 5%. Overhead expenses are 15% of the regular selling price and profit is 5% of the regular selling price. During a sale the lens was sold at a markdown of 15%. What was the operating profit or loss on the sale?

**Bonus Question** (2 marks)

Find 3 consecutive integers such that 3 times the smallest less 10 is 9 more than the sum of the other two.