ALBERTA MATH 30-3 · UNIT 4 · 10 QUESTIONS

Formulas and Relations — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **The graph shows the height of a stone over time. The time when the stone lands back on the ground is**

- **A** 0 s
- **B** 2 s
- **C** 4 s
- **D** 20 s

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2 **A graph of a savings account balance versus time passes through (0, 500) , (1, 550) , and (2, 605) , where the first number is years and the second is dollars. The balance grows each year by**

- A 50%
- B 10%
- C 5%
- D 110%

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3 **Density is $D = \frac{m}{V}$. A metal part has density 2.5 g/cm³ and volume 12 cm³ . Its mass is**

- A 30 g
- B 4.8 g
- C 14.5 g
- D 9.5 g

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4 **A hot dog stand has profit P = 3n - 120 , where P is the profit in dollars and n is the number of hot dogs sold. The stand breaks even, with a profit of $0 , when n is**

- A 117
- B 360
- C 30
- D 40

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5 **A graph of elevation versus horizontal distance for a ski run passes through (0, 900) and (400, 300) , in metres. The slope of the run, to the nearest hundredth, is**

- A -600
- B 1.50
- C -1.50
- D -0.67

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6 **The circumference of a circle is $C = \pi d$. Using $\pi = 3.14$, a pipe with circumference 50.24 cm has diameter**

- A 8 cm
- B 16 cm
- C 25.12 cm
- D 12.56 cm

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7 **Square tiles have side lengths of 1 cm , 2 cm , 3 cm , and 4 cm , with areas of 1 cm^2 , 4 cm^2 , 9 cm^2 , and 16 cm^2 . Following the same pattern, a tile with side length 7 cm has area**

- A 28 cm^2
- B 14 cm^2
- C 42 cm^2
- D 49 cm^2

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8 **The total cost of an item with 5% GST is $T = 1.05P$, where P is the price before tax. If the total cost is $210, the price before tax is**

- **A** $199.50
- **B** $220.50
- **C** $200
- **D** $10.50

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9 **A water bill charges a $18 service fee plus $3 for each m^3 of water used. If C is the total cost in dollars and v is the volume used, an equation for the bill is**

- **A** $C = 18v + 3$
- **B** $C = 3v + 18$
- **C** $C = 21v$
- **D** $C = 3(v + 18)$

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10 **Distance, rate, and time are related by d = rt . A truck travels 180 km at 60 km/h . The travel time, in minutes, is**

A 180 minutes

B 3 minutes

C 120 minutes

D 240 minutes

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ANSWER KEY

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

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