

Mental Math

A-1

Grade 12 Essential Mathematics (40S)

Unit A: Home Finance

Specific Learning Outcome: 12.E6.H.1

General Questions	Answers
1. Write $2\frac{1}{4}$ as an improper fraction.	$\frac{9}{4}$
2. What number satisfies the following equation? $\frac{x}{6} = \frac{12}{24}$	$x = 3$
3. Complete the pattern: 2, 4, 8, 16, _____, _____	32, 64
4. 1% of \$200 is \$2. What is 0.5% of \$200?	\$1
5. You need to buy a new microwave for your house. The microwave you want costs \$220 with taxes. If you can set aside \$50 a week, how many weeks will it take before you can afford the microwave?	5 weeks
Unit Questions	
6. Aidan wants to buy a house worth \$300,000. He needs to have a down payment of 20% of the purchase price of the house. How much is the down payment?	\$60,000
7. Helga wants to buy a \$180,000 house in 3 years. She needs a \$36,000 down payment. How much does she need to save each month to reach this goal?	\$1000 per month
8. Kieran makes \$2500 a month, Dallas makes \$1700 a month, and Betty makes \$1900 a month. How much money do they make altogether?	\$6100 per month
Other Questions	
9.	
10.	

Mental Math

A-2

Grade 12 Essential Mathematics (40S)

Unit A: Home Finance

Specific Learning Outcome: 12.E6.H.1

General Questions

1. Evaluate the expression for $z = -1$: $3z - (-7)$
2. How much tax would you have to pay on an item that costs \$49.99 (approximately) if the PST = 7% and the GST = 5%?
3. Since 10% of 200 is 20, what is 35% of 200?
4. Evaluate: $\left(\frac{8}{16}\right) \times 12$
5. You have to buy a new toaster for your house. The toaster you want to buy costs \$54.45, including tax. If you give the cashier \$60, how much change should you get back?

Answers

4

\$6

70

6

\$5.55

Unit Questions

6. Skyler has a monthly mortgage payment of \$862. Her property taxes are \$187 per month and her heating bill is \$120 per month. How much are these expenses altogether?
7. Barinder's property taxes are \$1924 annually (yearly). He gets an Education Property Tax Credit of \$700. How much does Barinder pay in property taxes each month?
8. Olaf's gross income is \$48,000 annually. How much is his monthly gross income?

\$1169

\$102
per month

\$4000

Other Questions

9.

10.

Mental Math

A-3

Grade 12 Essential Mathematics (40S)

Unit A: Home Finance

Specific Learning Outcome: 12.E6.H.1

General Questions	Answers
1. Evaluate: $\left(\frac{3}{7}\right)\left(\frac{14}{3}\right)$	2
2. You are furnishing your new apartment with a budget of \$2800. You have already bought a couch for \$925, table and chairs for \$750, and a stove for \$1075. How much money do you have left in your budget to buy a refrigerator? Is this reasonable?	\$50 No, it is not reasonable.
3. Write two equivalent fractions for $\frac{17}{34}$.	$\frac{1}{2}$, $\frac{2}{4}$, and $\frac{34}{68}$
4. Josiah and his family go out for dinner and their restaurant bill is \$126. If they want to leave a 15% tip, how much should they leave?	\$18.90
5. You are approved for a \$219,000 mortgage from your bank. If you have saved up an additional \$16,000 for a down payment, how much can you afford to spend on a house?	\$235,000
Unit Questions	
6. Samir bought land for \$80,000. He pays a land transfer tax of \$0 on the first \$30,000 and 0.5% on the amount between \$30,000 and \$90,000. How much in dollars does he pay for the land transfer tax?	\$250
7. Adewale bought a house on June 1. He will have to pay \$2000 in property taxes on or before October 1 of the same year. How much should Adewale save each month to pay his property taxes on time?	\$500 per month
8. The Lucado family bought a house. They paid \$350 for a house inspection, \$40 for an appraisal fee, \$60 for their mortgage application, \$650 for the lawyer and other miscellaneous fees, \$75 to hook up a phone, Internet, and cable, and \$425 for the moving company. How much did they spend on these miscellaneous moving costs?	\$1600
Other Questions	
9.	
10.	

Mental Math

A-4

Grade 12 Essential Mathematics (40S)

Unit A: Home Finance

Specific Learning Outcome: 12.E6.H.1

General Questions

1. Tyla purchases a home for \$207,000 with no down payment. She has calculated that she will spend \$278,187 paying for the house during the 25-year amortization period. How much money in interest will she pay during this 25-year period?
2. Tyla wants to purchase a television for her new home. One television is on sale for 10% off the purchase price of \$750. Another television is on sale for 15% off the purchase price of \$800. Which television is the least expensive?
3. Solve for g : $2g - 11 = 7$
4. Convert this percent to a fraction in lowest terms: 66%
5. Evaluate: $\frac{250\,000}{1000}$

Answers

\$71,187

The first television set

9

$\frac{33}{50}$

250

Unit Questions

6. Akim has a \$300,000 mortgage. He will make a monthly payment of \$5.00 per \$1000. Calculate Akim's monthly mortgage payment.
7. Joaquin has a \$220,000 mortgage. He will make a monthly payment of \$4 per \$1000. Calculate Joaquin's monthly mortgage payment.
8. Indra has a mortgage for \$300,000 over 25 years (or 300 months). She makes mortgage payments of \$1200 per month. How much interest will Indra pay on her mortgage?

\$1500 per month

\$880 per month

\$60,000

Other Questions

9.

10.

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A-5

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Unit A: Home Finance

Specific Learning Outcome: 12.E6.H.1

General Questions	Answers
1. Sharlee is covered for 70% of the replacement cost of the contents in her home. If the contents of her home are worth \$150,000, how much money will Sharlee receive in the event of a house fire?	\$105,000
2. Evaluate for $t = 5$: $3t - 8$	7
3. Carly is three times as old as Marla. Marla is one-fourth as old as Pauly. If Pauly is 20, how old are Carly and Marla?	Marla is 5 Carly is 15
4. If 17×18 is 306, what is 17×20 ?	340
5. Evaluate: $\frac{1}{5} + \frac{2}{3}$	$\frac{13}{15}$
Unit Questions	
6. Niamh's house burned down. Her homeowner's insurance covered \$280,000 in replacement costs. Niamh spent \$230,000 on building a new home and \$70,000 on furniture and other household contents. Niamh had to pay a \$500 deductible to the insurance company. In total, how much did Niamh have to pay?	\$20,500
7. Bruno has tenant insurance. When his basement flooded, the insurance paid out \$12,000. Bruno's costs totalled \$13,500 and he had to pay a \$200 deductible to the insurance company. How much did Bruno have to pay in total?	\$1700
8. Cormac pays an annual rate of \$640 for house insurance and \$170 for sewage backup insurance. He has a sump pump so he gets a discount of \$150. How much is Cormac's monthly house insurance payment?	\$55 per month
Other Questions	
9.	
10.	

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A-6

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Unit A: Home Finance

Specific Learning Outcome: 12.E6.H.1

General Questions

1. Evaluate: $\frac{3}{5} \times \frac{10}{7}$
2. Cleavon is buying his lunch at a food court in the mall. He spends \$4.25 on a slice of pizza, \$2.75 on a drink, and \$3.50 on a salad. How much does he spend on his lunch?
3. Convert the following decimal to a percent: 0.006
4. You want to have the following items in your backyard: a shed, a dog run, and a garden. If your backyard is $10 \text{ m} \times 10 \text{ m}$, can you fit a shed that is $4 \text{ m} \times 5 \text{ m}$, a dog run that is $3 \text{ m} \times 10 \text{ m}$, and garden that is $5 \text{ m} \times 5 \text{ m}$?
5. You are paid \$11 per hour. If you work 30 hours this week and 21 hours next week, how much will you be paid for these two weeks?

Answers

$\frac{6}{7}$

\$10.50

0.6%

Yes

\$561

Unit Questions

6. The Duval family have a total portioned assessment of \$60,000 on their home. The annual municipal rate is 15 mills. Calculate the total annual municipal taxes for the property.
7. The Dhillon family have a total portioned assessment of \$50,000 on their home. The annual education rate is 12 mills. Calculate the total annual education taxes for the property.
8. The Smith family have a total portioned assessment of \$100,000 on their home. The annual municipal rate is 15 mills. The annual education rate is 17 mills. Calculate the total annual municipal taxes and education taxes for the property.

\$900

\$600

\$3200

Other Questions

9.

10.

Mental Math

A-7

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Unit A: Home Finance

Specific Learning Outcome: 12.E6.H.1

General Questions	Answers
1. Melika is on a vacation in Hawaii. She packs clothes that weigh 5.4 kg, toiletries that weigh 2.8 kg, and books that weigh 1.2 kg. If the airport has a limit of 10 kg per carry-on bag, how much extra room does Melika have to bring home souvenirs?	0.6 kg
2. Evaluate: $\frac{3}{7} \times \frac{7}{6}$	$\frac{1}{2}$
3. A canoe is on sale for 35% off the regular price of \$300. How much is the canoe on sale for?	\$195
4. Find the next two terms in the pattern: 1, 5, 9, 13, _____, _____	17, 21
5. If 40 DVDs cost \$100, how much does each DVD cost?	\$2.50
Unit Questions	
6. The Vaarmeyer family has done preventative maintenance on their home for the last 5 years. This includes eavestrough cleaning at \$200 per year, changing HVAC filters at \$50 a year, and an annual furnace inspection at \$120. How much did preventative maintenance cost over the 5-year period?	\$1850
7. Carl has a fridge that costs \$500 a year in electricity bills. He decides to buy a new fridge, which costs \$25 a month in electricity bills. How much money does he save every year?	\$200
8. Delilah did not get a furnace inspection this year, which costs \$120. A few months later, Delilah's furnace broke and it cost \$3000 to replace. The repairwoman told her that if she had the inspection, they could have fixed the faulty part for \$500 and she wouldn't have had to replace the furnace. How much more did Delilah pay because of this mistake?	\$2380
Other Questions	
9.	
10.	

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A-8

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Specific Learning Outcome: 12.E6.H.1

General Questions

1. Evaluate: 2^6
2. If Myla takes 14 minutes to play one hole of golf, how long will it take her to play 9 holes of golf?
3. Zahra arrived at work at 8:15 a.m. and left work at 6:15 p.m. If Zahra gets paid \$10 an hour, and time-and-a-half for any hours worked over 8 hours in one day, how much did Zahra earn this day?
4. Write $2\frac{1}{3}$ as an improper fraction.
5. What number satisfies the following equation? $\frac{6}{42} = \frac{x}{7}$

Answers

64

126 minutes

\$110.00

$\frac{7}{3}$

$x = 1$

Unit Questions

6. Devon decides to buy a new fridge. His old fridge cost him \$1200 a year in electricity. His new fridge only costs \$45 a month in electricity. How much money will he save each month?
7. Navjot buys a new dishwasher on sale for \$1500. The electrical cost of her old dishwasher was \$1200 a year but the new dishwasher's electricity costs only \$25 a month. How many months will it take Navjot to get her \$1500 back? (Hint: Find the monthly savings first.)
8. Odis buys a new stove and pays \$75 a month for 3 years. His old stove costs \$50 a month in electricity and his new stove's electricity costs \$10 a month. How much more money does Odis spend each month for the next 3 years on the new stove?

\$55
per month

20 months

\$35
per month

Other Questions

9.

10.

Mental Math

A-9

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Specific Learning Outcome: 12.E6.H.1

General Questions	Answers
1. Gina realized that she had 3 more quarters in her pocket than she thought she had. If Gina has \$7.50 in quarters in her pocket, how many quarters did she originally think she had?	27
2. Leticia worked 20 hours this week and made \$220. If she works 15 hours next week at the same pay rate, how much will she earn?	\$165
3. If the gas tank in your vehicle holds 30 litres of gasoline and gasoline costs \$1.30 a litre, how much will it cost to fill up your vehicle with gasoline?	\$39
4. Evaluate: $\frac{1}{4} + \frac{2}{7}$	$\frac{15}{28}$
5. Estimate: 13% of 306	≈ 39 or 40
Unit Questions	
6. Anja has the choice to rent a house for \$2500 a month plus \$300 in monthly utilities or she can buy a house for \$2100 per month. She will also pay \$3600 a year in property taxes, \$600 a year in house insurance, \$600 a year in utilities, and \$1200 a year in maintenance. Which option is cheaper and by how much?	Buying is cheaper by \$200/month or \$2400/year.
7. Samara is a homeowner. The property taxes are \$1500 per year, the house insurance is \$700 per year, and the maintenance is \$150 a month. Samara puts aside \$4200 a year for these expenses. How much does she have left over each year?	\$200 per year
8. Frank Rockola is renting an apartment. He has \$4000 saved for a down payment on a house and he saves a further \$400 per month. How many more months will it take Frank to save a total of \$10,000?	15 more months
Other Questions	
9.	
10.	

