NAME: *Answer Key*

MIDTERM REVIEW

Complete the following math questions. You will see these same topics on the Mid Term Exam. If you do not have enough space, use loose leaf paper. **SHOW YOUR WORK FOR EACH QUESTION.**

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1. Ryan goes to a used bookstore where they're having a big sale. Paperback books are on sale for $1.50 each and hardcover books are $5.75. Ryan buys 5 paperbacks and 2 hardcovers. Write an equation (math sentence) to find out how much Ryan paid for the books.

$P = 1.50 \times 5 = \$7.50$

$H = 5.75 \times 2 = \$11.50$ Total: $\$19^{00}$

$(1.50 \times 5) + (5.75 \times 2) = \boxed{19}$

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2. Find the answer:

$14 \times 5 + 50^0 \times 10 = ?$

$70 + \underline{1} \times 10$

$70 + 10$

$= \boxed{80}$

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3. Which equation below has an answer of 32? **Show your work for each question.**

a. $4 + 5 \times 3 + 5 =$

$4 + 15 + 5 = 24$

b. $4 + (4 \times 5) + 8^0 =$

$4 + 20 + 1 = 25$

(c.) $4 + 8^1 + 4 \times 5 =$

$4 + 8 + 20 = \boxed{32}$

d. $1^6 \times 1^6 =$

$1 \times 1 = 1$

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4. **Find the answer:**

A) $4 \times 7 + 8 \div 2 = ?$

$28 + 4$

$= \boxed{32}$

B) $12 \div 6 \times 8 - 10 \div 2 = ?$

$2 \times 8 - 5$

$16 - 5 = \boxed{11}$

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5. Mary bought school supplies. She bought 6 notebooks that cost 0.39 cents each, then 2 packages of pencils at 0.79 cents each and finally one binder for $1.99.

A) Write an equation to show the total that Mary spent on school supplies.

B) How much did she spend? $\$5.91$

A) $(6 \times 0.39) + (2 \times 0.79) + 1.99$

$= 2.34 + 1.58 + 1.99$

$= \$5.91$

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6. **Find the answer:**

$[(2 + 24 \times 4)] \div [10 \div (4 - 4^0 \times 3)] = ?$

$(2 + 96) \div [10 \div (4 - 1 \times 3)]$

$(98) \div [10 \div (4 - 3)]$

$98 \div [10 \div (1)]$

$98 \div 10 = \boxed{9.8}$

7. Mr. Wagner took his family out for dinner. They ordered 3 different meals, that cost $10.99 each, 2 sodas at $3.00 each and 1 glass of tea at $1.25. Write an equation and find the total that Mr. Wagner spent on dinner (no taxes or tip needed).

$$3 \times 10.99 + 2 \times 3 + 1.25$$
$$= 32.97 + 6 + 1.25$$
$$= 40.22$$

8. A football team's record for the season is 12 wins and 4 losses. Write their record in a sentence as a product of prime numbers.

Do

| Wins | Losses | ① Trees |

Wins
12
∧
6 × 2
∧
3 × 2

OR

$2^2 × 3$ or] Answer
$2 × 2 × 3$

Losses
4
∧
2 × 2

or 2^2

Answer: 2×2

Should look like this ↗ 2^2

(M.A)

9. Use the table to answer questions # 9-11

City	High Temperature	Low Temperature
Montreal	5	-33
St. Jean	-8	-35
Bromont	-9	-28
Sorel	-1	-40

A) What is the range of all the High temperatures?

$5 - (-9) =$
$5 + ^{+}9$ (14)

B) What is the range of only the Low temperatures?

Highest —
lowest
$-28 - (-40)$
$-28 + 40$
$= (12)$

10. Arrange the temperatures from the whole table, in order from the greatest to lowest.

GREATEST   LOWEST

$5, -1, -8, -9, -28, -33, -35, -40$

11. What is the average of High temperatures?

$5 + -8 + -9 + -1 = -13$
$-13 \div 4 = -3.25 \rightarrow (-3)$

B) What is the average of low temperatures?

$-33 + -35 + -28 + -40$
$= -136 \div 4$
$= -34$

12. Mr. Olivier pays close attention to how much money is in his account. One week, he deposits $230.00, then he spends $15.00 on lunch twice, and then gave $25.00 to a friend.
put money in (+)

A) Write down an order of operations
$230 + (-15 \times 2) + -25$

B) How much does he have at the end of the week?
$230 + -30 + -25$
$= 175

13. How much would Steven pay for 4 bottles of Pepsi if the price for 12 bottles of Pepsi is $3?

$3 \div 12 = 0.25$ Unit Price

$4 \times 0.25 = \$1.^{00}$ for 4 Pepsi Bottles.

14. Charles went to the grocery store and bought four salmon steaks for $6.95 each, 8 potatoes for $0.75 each and two loaves of bread for $3.95 per loaf. If he gives the cashier three twenty dollar bills, **how much change will he get back?**

$4 \times 6.95 + 8 \times 0.75 + 2 \times 3.95$

$27.80 + 6. + 7.90$

$= \$41.70$ spent at the store

$3 \times 20 = \$60 - 41.70 = \boxed{\$18.30 \text{ back from cashier}}$

15. Find the answer for each situation below:

a) How many hours did Brett work if his hourly rate is $12/hr and he received $228?

$228 \div 12 = 19 \text{ hours}$

b) **Find the unit rate:** 4 dozen golf balls cost $60

$4 \times 12 = 48 \text{ golf balls}$

$60 \div 48 = \$1.25 / \text{golf ball (per)}$

16. **What is the type of variable in the following situation?**
High school students were asked "what career they think they will want to pursue when they graduate from high school".

Qualitative Variable

17. Vincent decided to start exercising. He goes to the Fitness Depot store near his house. He bought 2 benches for $30.58 each, 1 stationary bike for $319.82 and 3 dumbbells for $45.20 each. If he gave a deposit of $320 and agreed to pay the balance in two equal payments, **how much would each payment be?**

$2 \times 30.^{58} + 319.^{82} + 3 \times 45.20$

$61.60 + 319.82 + 135.60$

Spent in total $= \$516.58$

$\$516.^{58} - \$320 = 196.^{58} \div 2$

$\$98.29$ each installment

18. Ella had an overall term average of 72% last term. This term, six of her grades were 95, 80, 72, 50, 74 and 88. **Did Ella get a better average this term or last term?**

$95 + 80 + 72 + 50 + 74 + 88$

$= 459 \div 6$

$= 76.50 - \boxed{77\%}$

Ella got a better average THIS term

19. Explain why the following question asked in a survey is biased:
"Old Spice cologne smells kind of bad to me, don't you agree?

Influencing or leading people to give a certain Answer.
*Give an opinion on this cologne, but not others.

20. Jeremy decreased the speed of his car by 15 kilometres in 10 seconds. How much did he decrease his speed per second?

15 km / 10 sec = 1.5 km/sec

(Activity ÷ Time)
unit Rate

21. Volunteers at a bake sale sold slices of banana bread and raisin bread. They packaged both kinds of bread together. They have 63 slices of banana bread and 45 slices of raisin bread. They want to use all the bread in their packages and have no left over's.
A) What is the greatest number of packages they can put together? ⑨ is the greatest number of packages.

B) How many slices of each kind of bread is there in one package?

Raisin = 45 ÷ 9
= 5 slices

R = 45
∧
⑤ × 9
∧
③ × ③

Banana
63 ÷ 9
= 7 slices

B = 63 slius
∧
7 × 9
∧
3 × 3

45	3	3	5	
63	3	3	x	7

GCF = 3 × 3 = 9

22. Alexia wants to give her dog a special treat. She looks in her cupboard and sees 81 dog bones and 54 pieces of beef jerky. If she wants to give her dog the same number of treats every day, what is the greatest number of days she can give the dog these treats? 27 days

B) How many of each kind of treat will she give her dog?

81
∧
9 × 9
∧ ∧
3×3 3×3

54
∧
9 × 6
∧ ∧
3×3 3×2

54	3	3	3	×	2
81	3	3	3	3	

3 × 3 × 3 = 27 days

Bones: 81 ÷ 27
= 3 bones

Jerky = 54 ÷ 27
= 2 jerky

23. A radio station is giving away a discount coupon to Best Buy to every ninth caller and a free concert ticket to every 20th caller. Which caller will be the first to win both prizes?

9
∧
3 × 3

20
∧
5 × 4

9	3	3		
20			5	4

= 3 × 3 × 5 × 4
= 180th caller

24. Lea is a deep sea diver. She descends below the surface of the water at a rate of 60 feet each minute. What is her depth after 10 minutes?

60 feet = 1 minute

60 feet × 10 minutes

600 feet

25. Find the Degrees for each category below:

Categories	Amount of Money	Degrees on Circle Graph
Rent	1800	177.5 178°
Food	800	79°
Utilities	300	29.5 30°
Transportation	450	44°
Other	300	29.5 30°
Total	3650	360

SHOW YOUR WORK BELOW:

1900 ÷ 3650
800 ÷ 3650
300 ÷ 3650
450 ÷ 3650
300 ÷ 3650

26. The table below shows the professions of all of the members of a racket club. What percentage of the club members are actors?

Profession	Number of Members
Teachers	115
Lawyers	51
Computer Programmers	120
Actors	103
Other	126
Total	515

b) Find the % for all the other jobs:

Teachers = 115 ÷ 515 = 22.3 → 22%.
Lawyers = (51 ÷ 515) × 100 = 9.9 → 10%.
Comp. Prog = (120 ÷ 515) × 100 ⇒ 23%.
Actors = (103 ÷ 515) × 100 ⇒ 20%.
Other = (126 ÷ 515) × 100 ⇒ 24.46 → 25%.

27. The points awarded to the winners in the men's Olympic platform diving competition are shown. Order them from highest to lowest.

Year	Points	Year	Points
1972	504.12	1984	710.91
1976	600.51	1988	638.61
1980	835.65	1992	677.31

(1980) = 833.65
(1984) = 710.91
(1992) = 677.31
(1988) = 638.61
(1976) = 600.51
(1972) = 504.12

28. Round the numbers in the table to the position requested.

River	Length (km)	Nearest Hundred	Nearest Thousand
Mackenzie	4241	4200	4000
St. Lawrence	3058	3100	3000
Yukon	3185	3200	3000
Peace	1923	1900	2000
Athabasca	1231	1200	1000
Ottawa	1271	1300	1000

29.

Die Experiment

Bar graph with vertical axis "Frequency of Number Rolled" and horizontal axis "Number on the Die" (values 1–6). Bar values: 1 → 12, 2 → 18, 3 → 17, 4 → 24, 5 → 6, 6 → 33.
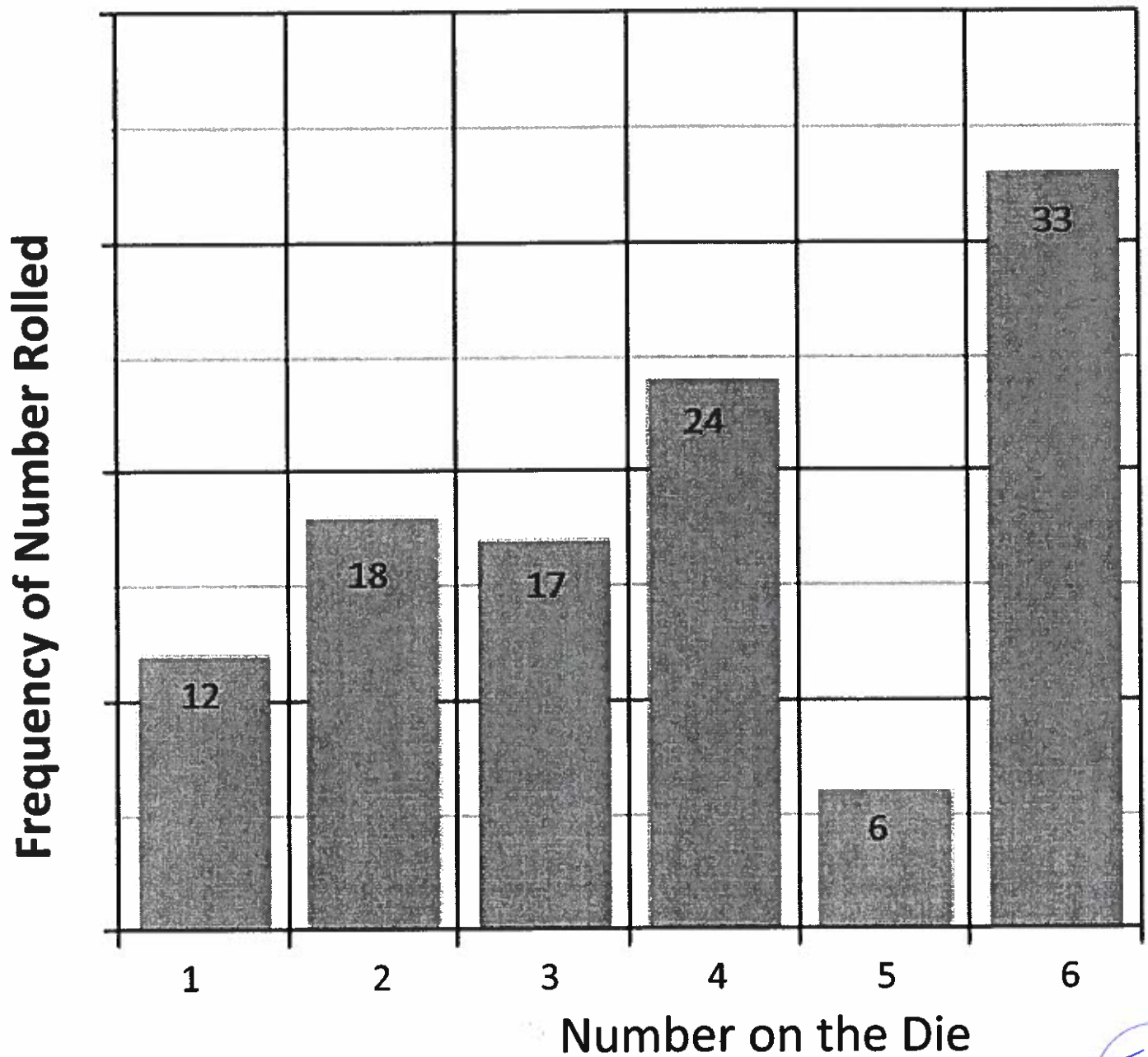
Using the bar graph above, answer the following questions:

a. How many times was the die thrown? $\underline{12+18+17+24+6+33 = 10\ times}$

b. What percent of the throws landed on 1 or 2? $\underline{12/110 = (11\%. = \#1)}$

$Total\ 27\%$

$\#2\ \frac{18}{110} = 16\%$

c. Are there any things missing/wrong with this graph? Or biased? List them.

- Frequency Scale - has NO numbers?
- No zero??

NAME: _____

30. Complete the Table of Values using the data from the bar graph below.

TODAY'S BREAKFAST *> Confusing Title = Favorite??*

Number of Orders

230				
92		102		
	36		17	

Eggs | Cereal | Oatmeal | (*Bagel/Muffin*) | Other

?↗
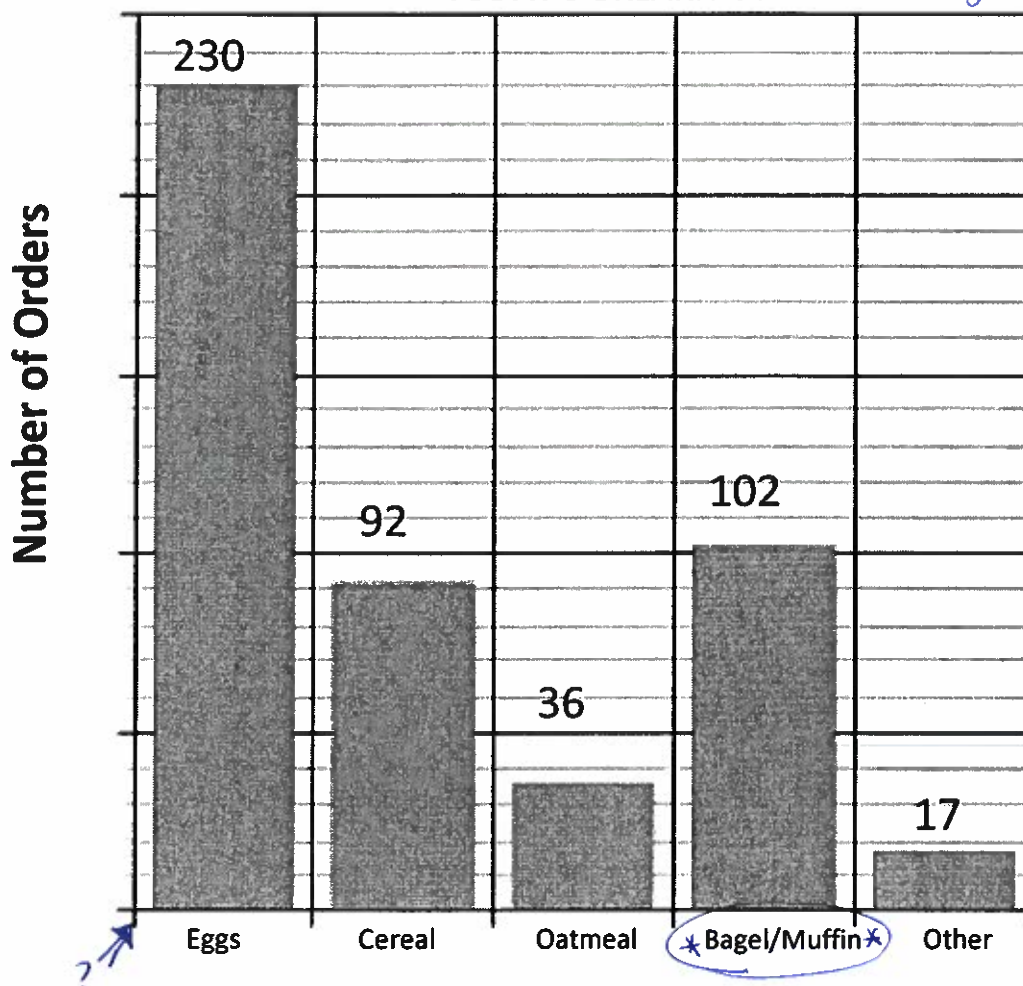
Missing Axis ⇒ Label: Breakfeast choices

Choices	Frequency	Percent
EGGS	230	$(230 \div 477) \times 100 = 48\%$
CEREAL	92	$(92 \div 477) \times 100 = 19\%$
OATMEAL	36	$(36 \div 477) \times 100 = 7.5 = 8\%$
BAGEL/ MUFFIN	102	$(102 \div 477) \times 100 = 21\%$
OTHER	17	$(17 \div 477) \times 100 = 4\%$

*Total = 477   =100%

a. What kind of variable is being studied here?
   ___Qualitative.___

b. Are there any things missing/wrong with this graph? Or biased? List them.
   ① No totals in Frequency Table   ② Scale is missing numbers.
   ③ Does NOT start at zero   ④ Axis Not labelled   ⑤ Title can be confusi
   ⑥ Bagel + muffin—need to be SEPERATE categories.