

MATH 10 - CHAPTER 1 - PRETEST

parent/guardian signature

Multiple Choice: Non Calculator - Part A - 10 minutes

CIRCLE the choice that best completes the statement or answers the question.

1. Determine the greatest common factor of 56 and 88.
 - a. 77
 - b. 616
 - c. 7
 - d. 8

2. Simplify $\frac{(3.5^{-6})(3.5^5)}{3.5^{-1}}$ by writing as a single power.

- a. 3.5^0
- b. 3.5^{-29}
- c. 3.5^0
- d. 3.5^{-2}

3. Determine the least common multiple of 10 and 22.

- a. 2
- b. 55
- c. 220
- d. 110

4. Evaluate $\left(\frac{2}{3}\right)^{-3}$.

- | | |
|-------------------|-------------------|
| a. $\frac{27}{8}$ | c. $\frac{27}{8}$ |
| b. $\frac{8}{27}$ | d. $-\frac{1}{6}$ |

5. Express 2187 as a power of 3.

- | | |
|-------------------|------------|
| a. 3×729 | c. 7^3 |
| b. 3^7 | d. 729^3 |

Part B: END OF NON CALCULATOR - When the 10 min are up you can use a calculator

6. Write the prime factorization of 630.

- a. $2 \cdot 5 \cdot 7 \cdot 9$
- b. $2 \cdot 5 \cdot 63$
- c. $2 \cdot 3^2 \cdot 5 \cdot 7$
- d. $2 \cdot 3 \cdot 5 \cdot 7$

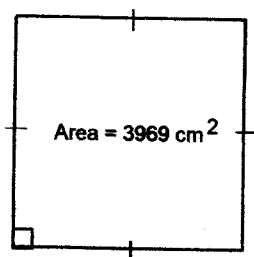
7. Determine the cube root of 42 875.

- a. 1225
- b. 4763.9
- c. 207.1
- d. 35

8. There are 16 male students and 20 female students in a Grade 10 math class. The teacher wants to divide the class into groups with the same number of males and the same number of females in each group. What is the greatest number of groups the teacher can make?

- a. 12
- b. 4
- c. 8
- d. 16

9. Determine the side length of this square.



- a. 63 cm
- b. 15.83 cm
- c. 992.25 cm
- d. 441 cm

10. Which power with a negative exponent is equivalent to $\frac{1}{125}$?

- a. 5^{-3}
- b. -5^{-3}
- c. 3^{-5}
- d. $(-5)^3$

11. Simplify $\frac{12p^3q^{-7}}{15pq^6}$. Write using powers with positive exponents.

- a. $\frac{4p^3}{5q^{13}}$
- b. $\frac{p^2}{3q^{13}}$
- c. $\frac{4p^2}{5q}$
- d. $\frac{4p^2}{5q^{13}}$

12. What is the value of -4^6 ?

- a. -4096
- b. -24
- c. 24
- d. 4096

13. Simplify $(3^2)^{-3}$.

a. -3^6

b. $-\frac{1}{3^6}$

c. $\frac{1}{3^6}$

d. 3^6

Short Answer - SHOW YOUR WORK

14. Determine the least common multiple of 450 and 180.
WORK

LCM = _____

15. Evaluate $(-4)^{-4}$

WORK

ANSWER

16. Simplify $\left(\frac{3}{4}m^{-3}n^{-7}p^{-2}\right)^{-4}$

WORK

ANSWER

17. Evaluate:

$\left(\frac{4^2}{9^0}\right)^4$

WORK

ANSWER

18. Evaluate.

a) $10 \times 4 + 6^3$
WORK

b) $5 \times 2^5 - 6^2 \times 2$

ANSWER

Problem - SHOW YOUR WORK

19. A square has area 40.0 cm^2 . Determine the perimeter of the square to the nearest tenth of a centimetre. (remember: a square has equal sides and perimeter of any object is adding all sides)
WORK

ANSWER

20. Write each of the following in scientific notation.

a) 15 000

b) 0.0125

c) 0.000 096

21. Change to scientific notation and then evaluate. Leave the answer in scientific notation (round the number portion to one decimal place).

$$\frac{68,000,000 \times 49,000,000,000}{603,000,000,000,000}$$