

**EQAO Grade 9 Math Practice (MTH1W)**Ontario De-streamed — Algebra, Linear Relations, Geometry, Data & Financial Literacy

Number & Operations*Exponents, roots, rationals, and order of operations.*

1. Simplify: $(-3)^2 + 4 \times 2 - 1$

- A) 14
- B) 16
- C) 18
- D) 8

2. Evaluate: $\sqrt{144} - \sqrt{49}$

- A) 5
- B) 7
- C) 9
- D) 3

3. Express 0.6 repeating as a fraction.

- A) $\frac{3}{5}$
- B) $\frac{2}{3}$
- C) $\frac{6}{10}$
- D) $\frac{6}{9}$

4. Simplify: $(2^3)(2^4) \div 2^5$

- A) 2^2
- B) 2^7
- C) 2^{12}
- D) 4

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Algebra & Coding*Expanding, factoring, and solving equations.***5.** Expand and simplify: $3(2x - 4) + 5x$

- A) $11x - 12$
- B) $11x - 4$
- C) $6x - 12$
- D) $11x + 12$

6. Solve: $2(x + 3) = 5x - 9$

- A) $x = 5$
- B) $x = 3$
- C) $x = 1$
- D) $x = -5$

7. Factor completely: $6x^2 + 9x$

- A) $3x(2x + 3)$
- B) $x(6x + 9)$
- C) $3(2x^2 + 3x)$
- D) $6x(x + 9)$

8. The perimeter of a rectangle is 58 cm. The length is 3 cm more than twice the width. Find the dimensions.



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Linear Relations

Slope, y-intercept, graphing, and equations of lines.

9. What is the slope of the line passing through (2, 5) and (6, 13)?

- A) 1
- B) 2
- C) 3
- D) 4

10. A line has equation $y = -3x + 7$. What is its y-intercept?

- A) -3
- B) 3
- C) 7
- D) -7

11. Which equation represents a line with slope $\frac{1}{2}$ passing through the origin?

- A) $y = 2x$
- B) $y = x/2$
- C) $y = x + 1/2$
- D) $y = (x+1)/2$

12. A cell phone plan costs \$25/month plus \$0.05 per text message. Write the equation for total monthly cost C in terms of number of texts t . How much does 200 texts cost?

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Geometry (Analytic & Measurement)*Distance, midpoint, area, volume, and circle properties.***13.** Find the midpoint of the segment from A(1, 3) to B(7, 9).

- A) (3, 6)
- B) (4, 6)
- C) (4, 5)
- D) (8, 12)

14. A cylinder has radius 5 cm and height 10 cm. What is its volume? (Use $\pi = 3.14$)

- A) 157 cm³
- B) 314 cm³
- C) 785 cm³
- D) 1570 cm³

15. The area of a circle is 154 cm². What is the approximate radius? (Use $\pi = 3.14$)

- A) 5 cm
- B) 7 cm
- C) 10 cm
- D) 14 cm

16. Two lines have slopes of $\frac{2}{3}$ and $-\frac{3}{2}$. Are they parallel, perpendicular, or neither? Explain.

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Data & Probability

17. A data set has values: 12, 15, 15, 18, 20, 22, 25. What is the interquartile range (IQR)?

- A) 5
- B) 7
- C) 8
- D) 10

18. Two dice are rolled. What is the probability that the sum is 7?

- A) $\frac{1}{6}$
- B) $\frac{1}{12}$
- C) $\frac{7}{36}$
- D) $\frac{6}{36}$

19. A scatter plot shows a negative correlation. Which best describes the trend?

- A) As x increases, y increases
- B) As x increases, y decreases
- C) There is no relationship
- D) x and y are equal

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Financial Literacy

20. You invest \$500 at 4% simple interest per year. How much interest do you earn after 3 years?

- A) \$20
- B) \$40
- C) \$60
- D) \$80

21. A pair of shoes costs \$89.99 plus 13% HST. What is the total cost?

- A) \$100.69
- B) \$101.69
- C) \$102.69
- D) \$93.69

22. Maya earns \$15.50/hour and works 25 hours per week. Her deductions are 22% of gross pay. What is her weekly net pay?



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