

Name: _____

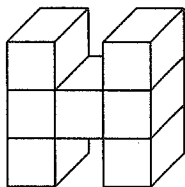
Math 9 - Final Exam Review (All Units)

NC = no calculator

Multiple Choice

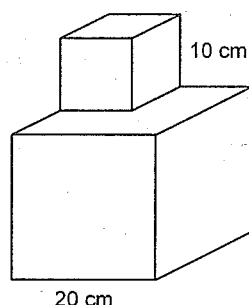
Identify the choice that best completes the statement or answers the question.

- NC ____ 1. Determine the value of $\sqrt{0.16}$.
A. 0.4 B. 0.07 C. 0.2 D. 0.04
- NC ____ 2. Determine the value of $\sqrt{0.09}$.
A. 0.3 B. 0.045 C. 0.0225 D. 0.03
- NC ____ 3. Determine the value of $\sqrt{2.56}$.
A. 0.64 B. 0.16 C. 0.8 D. 1.6
- NC ____ 4. Determine the value of $\sqrt{\frac{72}{98}}$.
A. $\frac{6}{14}$ B. $\frac{6}{7}$ C. $\frac{12}{7}$ D. $\frac{36}{49}$
- NC ____ 5. Determine the value of $\sqrt{77.2}$, to the nearest tenth.
A. 8.79 B. 9 C. 8.8 D. 8.7
- ____ 6. Estimate the value of $\sqrt{\frac{5}{11}}$, to the nearest tenth.
A. 0.7 B. 0.6 C. 0.67 D. 0.5
- NC ____ 7. This object is made from 7 centimetre cubes. Determine its surface area.



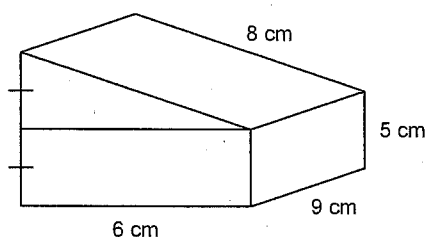
- A. 30 cm² B. 42 cm² C. 26 cm² D. 22 cm²

8. This composite object is made of a 10-cm cube on top of a 20-cm cube. Determine its surface area.



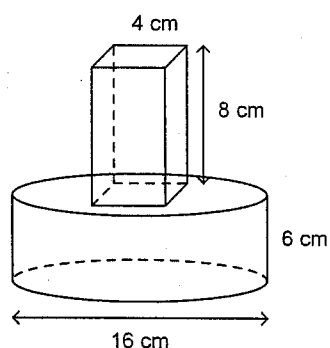
- A. 2800 cm^2 B. 2500 cm^2 C. 2900 cm^2 D. 3000 cm^2

9. This object is composed of a right triangular prism on top of a right rectangular prism. Determine the surface area of the object.



- A. 351 cm^2 B. 297 cm^2 C. 207 cm^2 D. 441 cm^2

10. This object is composed of a rectangular prism on top of a cylinder. The rectangular prism has height 8 cm and square ends of side length 4 cm. The cylinder has diameter 16 cm and height 6 cm. Determine the surface area of the object, to the nearest square centimetre.



- A. 631 cm^2 B. 816 cm^2 C. 832 cm^2 D. 848 cm^2

- NC 11. Evaluate: 10^7
A. 100 000 000 B. 10 000 000 C. 1 000 000 D. 70

- NC 12. Evaluate: -8^0
A. 8 B. 0 C. 1 D. -1

13. Evaluate: $-(10^0)^9$
 A. -9 B. 1 C. -1 D. 9
14. Evaluate: $2^3 - (-3)^3$
 A. 15 B. -19 C. -3 D. 35
15. Evaluate: $(5^3 - 4^2)^0 - (6^2 - 8^0)$
 A. -34 B. -35 C. -36 D. 73
16. Write the quotient of $(-8)^{12} \div (-8)^4$ as a single power.
 A. 3 B. $(-8)^8$ C. $(-8)^3$ D. $(-8)^{16}$
17. Express $7^9 \times 7^3 \div 7^6$ as a single power.
 A. 7^2 B. 7^6 C. 7^{18} D. 7^{21}
18. Evaluate: $\frac{(5)^8 \times (5)^6}{(5)^{12}}$
 A. 10 B. 4 C. 2 D. 25
19. Evaluate: $10^2 \times 10^5 + 10^5$
 A. 10 100 000 C. 120
 B. 1 000 000 000 000 D. 10 000 100 000
20. Evaluate: $[(-4) \times (5)]^3$
 A. 8000 B. -1 C. -8000 D. 1
21. Which numbers are rational numbers?
 $\frac{2}{11}$, 3.6, $0.8\bar{3}$, $\frac{11}{2}$
 A. $\frac{2}{11}$ and 3.6 B. $\frac{2}{11}$ and $\frac{11}{2}$ C. All of them D. $\frac{2}{11}$, 3.6, and $\frac{11}{2}$
22. Which of these numbers are between $\frac{4}{6}$ and $\frac{7}{5}$?
 $\frac{5}{6}$, $\frac{1}{5}$, $\frac{7}{8}$, $\frac{4}{5}$
 A. $\frac{5}{6}$ and $\frac{7}{8}$ B. $\frac{5}{6}$, $\frac{7}{8}$, and $\frac{4}{5}$ C. $\frac{1}{5}$ and $\frac{7}{8}$ D. $\frac{5}{6}$ and $\frac{4}{5}$
23. Determine this sum.
 $\frac{14}{7} + \left(-\frac{15}{14}\right)$
 A. $\frac{13}{14}$ B. $-\frac{13}{14}$ C. $\frac{1}{7}$ D. $-\frac{1}{7}$

- 4C ____ 24. Determine this difference.

$$-4\frac{2}{3} - 2\frac{1}{2}$$

A. $-7\frac{1}{6}$

B. $7\frac{1}{6}$

C. $2\frac{1}{6}$

D. $-2\frac{1}{6}$

- 4C ____ 25. Determine this product.

$$\frac{4}{9} \times (-6)$$

A. $-\frac{8}{3}$

B. $\frac{50}{9}$

C. $-\frac{50}{9}$

D. $\frac{8}{3}$

- 4C ____ 26. Determine this product.

$$\left(-4\frac{1}{3}\right)\left(1\frac{4}{5}\right)$$

A. $7\frac{4}{5}$

B. $2\frac{8}{15}$

C. $-2\frac{8}{15}$

D. $-7\frac{4}{5}$

- 4C ____ 27. Determine this quotient.

$$\frac{11}{12} \div \left(-\frac{5}{6}\right)$$

A. $-\frac{55}{72}$

B. $-\frac{72}{55}$

C. $-\frac{10}{11}$

D. $-\frac{11}{10}$

- 4C ____ 28. Evaluate.

$$\frac{5}{6} - \frac{2}{3} \times \frac{3}{4} + \frac{5}{6}$$

A. -4

B. $-\frac{1}{72}$

C. $\frac{7}{6}$

D. $\frac{5}{7}$

- ____ 29. The pattern in this table continues. Determine an equation that relates the term value to the term number.

Term Number, s	1	2	3	4	5
Term Value, w	6	10	14	18	22

A. $w = 4s + 2$

B. $w = 6s$

C. $w = 3s + 2$

D. $w = 2s + 4$

30. Complete the table of values.

$$y = 9 - 5x$$

x	2	4	6	8
y				

A.

x	2	4	6	8
y	4	-1	-6	-11

C.

x	2	4	6	8
y	4	8	12	16

B.

x	2	4	6	8
y	8	16	24	32

D.

x	2	4	6	8
y	-1	-11	-21	-31

31. Which equation describes a horizontal line?

i) $x + 9 = 2$

ii) $y + x = 9$

iii) $y - x = 0$

iv) $y + 2 = 9$

A. iv

B. ii

C. i

D. iii

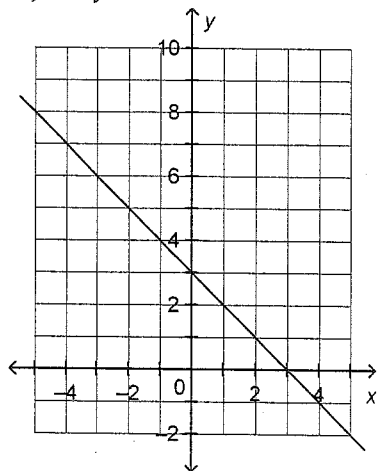
32. Which equation describes the graph?

i) $x + y = 3$

ii) $x - y = 3$

iii) $y - x = 3$

iv) $x + y = -3$



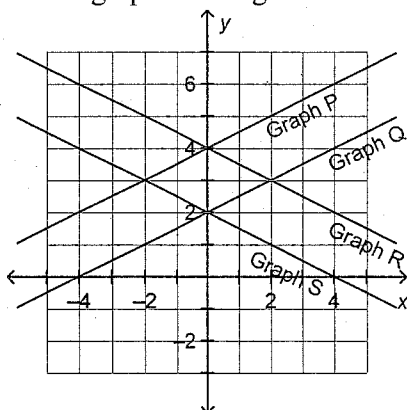
A. i

B. ii

C. iii

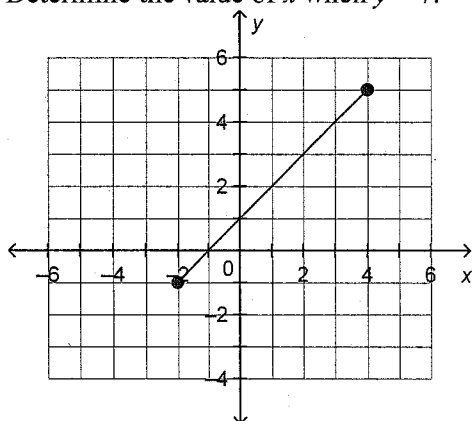
D. iv

33. Which graph on this grid has the equation $x + 2y = 4$?



- A. Graph Q B. Graph P C. Graph S D. Graph R

34. This graph represents a linear relation. Determine the value of x when $y = 7$.



- A. 6 B. -1 C. 8 D. 1

35. Combine like terms. Sketch algebra tiles if it helps.

$$9x^2 - 7x + 2x - 6x^2$$

- A. $-2x^2$ B. $3x^2 - 5x$ C. $2x^2 - 4x$ D. $3x^2 + 5x$

36. Combine like terms. Sketch algebra tiles if it helps.

$$3x^2 - 3 - 7x - 6x^2 + 5$$

- A. $-3x^2 - 7x - 2$ C. $3x^2 - 7x + 2$
B. $-3x^2 - 7x + 2$ D. $3x^2 - 7x - 2$

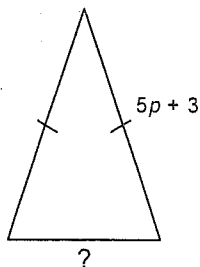
37. Simplify: $10x^2 - 8 + 3x + 5 - 6x^2 - 6x$

- A. $4x^2 - 3x + 3$ C. $4x^2 + 3x + 3$
B. $4x^2 - 3x - 3$ D. $4x^4 - 3x^2 - 3$

38. Add: $(3x^2 - 4x + 8) + (-x^2 - 2x - 8)$

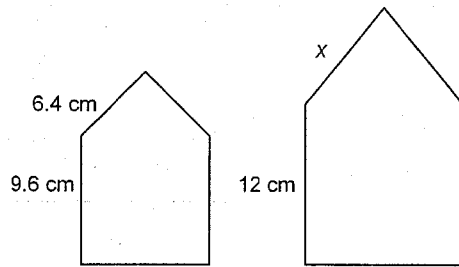
- A. $2x^2 - 6x$ B. $2x^2 - 2x$ C. $2x^2 - 6x + 1$ D. $2x^2 + 6x$

39. Subtract: $(3x - 7x^2 + 2) - (4x^2 - 5 + 6x)$
 A. $-11x^2 + 3x - 7$ C. $-11x^2 - 3x + 7$
 B. $-11x^2 - 9x - 3$ D. $11x^2 + 3x - 7$
40. The perimeter of this isosceles triangle is represented by the polynomial $15p + 12$. Write a simplified polynomial for the length of the unknown side.



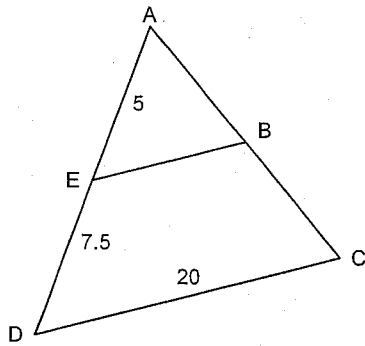
- A. $25p + 18$ B. $5p + 6$ C. $10p + 9$ D. $5p + 3$
41. Multiply: $(-2)(4c^2 - 6c - 7)$
 A. $-8c^2 - 12c - 14$ C. $-8c^2 + 12c + 14$
 B. $2c^2 - 8c - 9$ D. $-8c^2 - 6c - 7$
42. Divide: $(9x^2) \div (-3x)$
 A. $-3x$ B. $-12x^2$ C. $6x^2$ D. $-3x^2$
43. Multiply: $(5y - 7)(-y)$
 A. $-5y^2 + 7y$ B. $4y^2 - 7$ C. $-5y^2 - 7$ D. $4y^2 + 7y$
44. Solve: $8 = 5 + \frac{x}{3}$
 A. -7 B. 19 C. 0 D. 9
45. Solve: $4v - 6 = -14$
 A. $v = -\frac{1}{2}$ B. $v = 2$ C. $v = -2$ D. $v = -2$
46. Solve: $13 - 4x = 3x - 8$
 A. $x = -3$ B. $x = \frac{1}{3}$ C. $x = -\frac{1}{3}$ D. $x = 3$
47. Solve: $\frac{x}{3} + 7 > 13$
 A. $x > 18$ B. $x < 18$ C. $x < -8$ D. $x > 6$
48. Solve: $\frac{m}{-3} < 7$
 A. $m > -21$ B. $m < 21$ C. $m > 21$ D. $m < -21$

49. These two pentagons are similar. Determine the value of x .



- A. 8 cm B. 1.9 cm C. 5.12 cm D. 18 cm

50. Determine the length of EB in this pair of similar triangles.



- A. 13.3 B. 10 C. 8 D. 5

Math 9 - Final Exam Review (All Units)

Answer Section

MULTIPLE CHOICE

- | | |
|-------|-------|
| 1. A | |
| 2. A | |
| 3. D | |
| 4. B | |
| 5. C | |
| 6. A | |
| 7. A | |
| 8. A | |
| 9. A | |
| 10. C | |
| 11. B | |
| 12. D | |
| 13. C | |
| 14. D | |
| 15. A | |
| 16. B | |
| 17. B | |
| 18. D | |
| 19. A | |
| 20. C | |
| 21. C | |
| 22. B | |
| 23. A | |
| 24. A | |
| 25. A | |
| 26. D | |
| 27. D | |
| 28. C | |
| 29. A | |
| 30. D | |
| 31. A | |
| 32. A | |
| 33. C | |
| 34. A | |
| 35. B | |
| 36. B | |
| 37. B | |
| 38. A | |
| | 39. C |
| | 40. B |
| | 41. C |
| | 42. A |
| | 43. A |
| | 44. D |
| | 45. C |
| | 46. D |
| | 47. A |
| | 48. A |
| | 49. A |
| | 50. C |

