

Math 8 - Cumulative Final Review 2 (2021-2022)**Multiple Choice**

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

DO ALL YOUR WORK ON A SEPERATE PIECE OF PAPER.

Evaluate the expression.

1. $(-7)^3$

- a. 2187
- b. -2187
- c. -343
- d. -21

2. $\left(-\frac{1}{3}\right)^5$

- a. $\frac{1}{243}$
- b. $-\frac{5}{243}$
- c. $\frac{5}{243}$
- d. $-\frac{1}{243}$

3. $3 + 2 \cdot (-4)^3$

- a. 131
- b. -125
- c. -509
- d. -320

4. 7.6^0

- a. 1
- b. 0
- c. 7.6
- d. 0.76

5. $\frac{2^4}{2^8}$

- a. $\frac{1}{8}$
- b. $\frac{1}{4}$
- c. $\frac{1}{16}$
- d. -16

6. $\frac{3^4}{3^7 \cdot 3^{-3}}$

- a. 81
- b. 0
- c. $\frac{1}{81}$
- d. 1

7. 4^{-2}

- a. $\frac{1}{8}$
- b. $-\frac{1}{4}$
- c. -16
- d. $\frac{1}{16}$

8. $(-3)^{-2}$

- a. $\frac{1}{3}$
- b. $-\frac{1}{6}$
- c. -9
- d. $\frac{1}{9}$

Simplify the expression. Write your answer as a power.

9. $9^2 \cdot 9^5$

- a. 81^7
- b. 9^7
- c. 9^{10}
- d. 7^9

10. $\left(-\frac{4}{5}\right)^9 \cdot \left(-\frac{4}{5}\right)^5$

a. $\left(-\frac{4}{5}\right)^{45}$

b. $\left(-\frac{8}{5}\right)^{14}$

c. $\left(-\frac{4}{5}\right)^{14}$

d. $\left(\frac{16}{25}\right)^{14}$

11. $t^8 \cdot t^5$

a. t^{40}

b. 13^t

c. $(2t)^{13}$

d. t^{13}

12. $d^5 \cdot d$

a. d^6

b. $(2d)^5$

c. $(2d)^6$

d. d^5

13. $(a^8)^6$

a. $8a^6$

b. a^{14}

c. $6a^8$

d. a^{48}

14. $\frac{(-7.2)^9}{(-7.2)^3}$

a. $(-7.2)^{12}$

b. $(-7.2)^6$

c. 6

d. $(-7.2)^{27}$

15. $\frac{b^6 \cdot b^{12}}{b^4 \cdot b^9}$

a. b^{23}

b. b^{36}

c. b^5

d. b^{59}

16. $\frac{s^{25}}{s^{13} \cdot s^9}$

a. s^{29}

b. s^{47}

c. s^3

d. s^{21}

Simplify the expression.

17. $(-2y)^5$

a. $-10y^5$

b. $-2y^{10}$

c. $-10y$

d. $-32y^5$

18. $(3d)^4$

a. $12d$

b. $81d^4$

c. $3d^{12}$

d. $12d^4$

19. $\left(\frac{1}{3}c\right)^2$

a. $\frac{2}{3}c$

b. $\frac{2}{3}c^2$

c. $\frac{1}{9}c^2$

d. $\frac{1}{3}c^2$

Write the number in standard form.

20. 3×10^8
 a. 2,400,000,000
 b. 300,000,000
 c. 30,000,000
 d. 3,000,000,000
21. 3.32×10^{-6}
 a. 0.00000332
 b. 0.0000332
 c. 0.000000332
 d. 0.00001992

Write the number in scientific notation.

22. 55,000
 a. 5.5×10^{-4}
 b. 55×10^3
 c. 5.5×10^4
 d. 5.5×10^5
23. 0.000000149
 a. 1.49×10^7
 b. 1.49×10^{-7}
 c. 0.149×10^{-8}
 d. 1.49×10^{-6}

Multiply. Write your answer in scientific notation.

24. $(6 \times 10^6) \times (6 \times 10^8)$
 a. 3.6×10^{14}
 b. 3.6×10^{15}
 c. 3.6×10^{48}
 d. 3.6×10^{13}

Divide. Write your answer in scientific notation.

25. $(9.2 \times 10^{-7}) \div (1.84 \times 10^{-6})$
 a. 5.0×10^0
 b. 5.0×10^{-1}
 c. 5.0×10^{-2}
 d. 2.0×10^0

Add or subtract. Write your answer in scientific notation.

26. $9.34 \times 10^4 - 9.89 \times 10^3$
 a. 5.5×10^6
 b. 8.351×10^5
 c. 8.351×10^3
 d. 8.351×10^4

The polygons are similar. Find x .

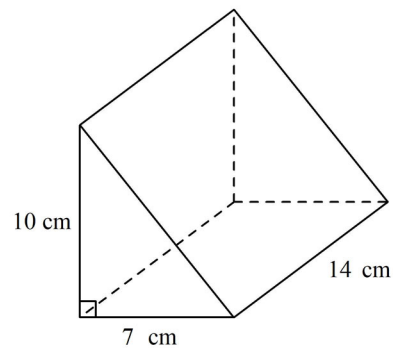
27.



- a. 10
 b. 18
 c. 14
 d. 12

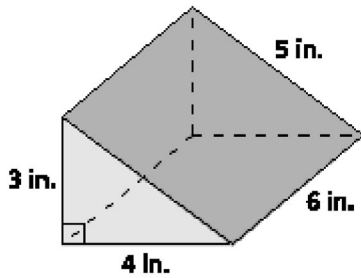
Find the volume of the prism.

28.



- a. 980 cm^3
 b. 490 cm^3
 c. 31 cm^3
 d. 132 cm^3

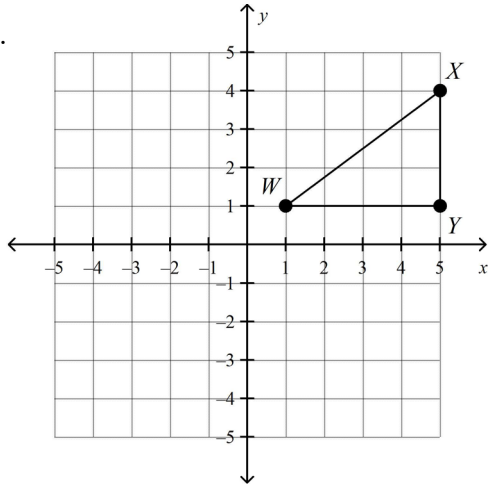
29. A right triangular prism and its dimensions are shown below. What is the total surface area, in square inches, of the right triangular prism?



- a. 84
- b. 96
- c. 180
- d. 360

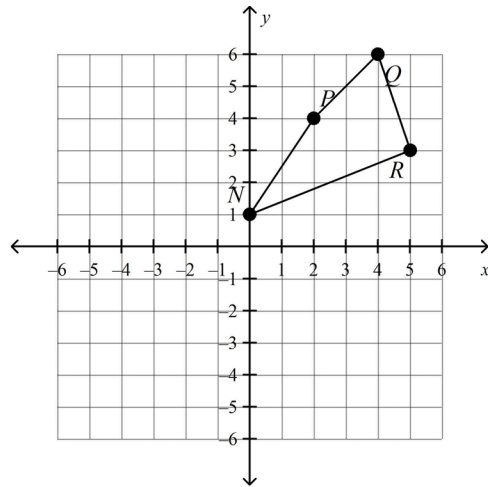
Find the coordinates of the image after the transformation.

30. Translate 5 units left and 2 units down.



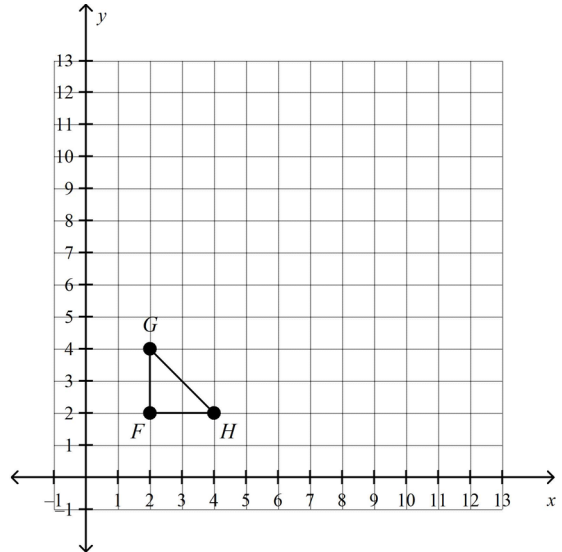
- a. $W'(-1, -4), X'(3, -1), Y'(3, -4)$
- b. $W'(-4, 3), X'(0, 6), Y'(0, 3)$
- c. $W'(6, -1), X'(10, 2), Y'(10, -1)$
- d. $W'(-4, -1), X'(0, 2), Y'(0, -1)$

31. Reflect in the x -axis.



- a. $N'(0, -1), P'(2, -4), Q'(4, -6), R'(5, -3)$
- b. $N'(-0, -1), P'(-2, -4), Q'(-4, -6), R'(-5, -3)$
- c. $N'(0, 1), P'(2, 4), Q'(4, 6), R'(5, 3)$
- d. $N'(-0, 1), P'(-2, 4), Q'(-4, 6), R'(-5, 3)$

32. Dilate with a scale factor of 3.



- a. $F'(6, 2), G'(6, 4), H'(12, 2)$
- b. $F'(\frac{2}{3}, \frac{2}{3}), G'(\frac{2}{3}, \frac{4}{3}), H'(\frac{4}{3}, \frac{2}{3})$
- c. $F'(6, 6), G'(6, 12), H'(12, 6)$
- d. $F'(2, 2), G'(2, 4), H'(4, 2)$

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Answer Section

MULTIPLE CHOICE

1. C
2. D
3. B
4. A
5. C
6. D
7. D
8. D
9. B
10. C
11. D
12. A
13. D
14. B
15. C
16. C
17. D
18. B
19. C
20. B
21. A
22. C
23. B
24. B
25. B
26. D
27. D
28. B
29. A
30. D
31. A
32. C