

Name _____

Date _____

VERTEXMATH • BUILD YOUR OWN • MTH1W GRADE 9

Number Sense: your summary

1 Fill in every blank from memory. No notes.

2 Check it against the Unit Summary in a different colour.

3 Tick ✓ or X on each card. Every X is a topic to review.

vertexmath.ca
Worksheet, answers &
this cheat sheet



Which percent question?

Write the tool for each case.

7% of \$260

18 out of 24

\$56 rises by \$14

1 Number sets

✓ X

1 Name the four number sets, from the smallest to the one that holds them all.

2 Classify $-20/5$, 0 and $2.\overline{3}$.

2 Order and $|x|$

✓ X

3 Order from least to greatest: -1.3 , $-5/4$, 0.2 , $-1/5$.

4 Evaluate $-|4 - 11| + |-6|$.

3 Integer signs

✓ X

5 Find the sign, then the value:
 $(-7)(-2)(-1)(-3)$.

6 A diver at -18 m rises to -7 m. Find the change in depth.

4 BEDMAS

✓ X

7 Evaluate $-3^4 + (-3)^4$.

8 Evaluate $20 - 6 \div (-3) \times 4$.

5 Fractions

✓ X

9 Evaluate $5/6 - 3/8$.

10 Evaluate $2/3 + 5/6 \times 2/5$.

6 Ratios and rates

✓ X

11 Simplify $45 : 60$. Then scale $7 : 4$ to $? : 28$.

12 Which is the better buy: 2 L of milk for \$5.29 or 4 L for \$9.89?

13 A map scale is $1 : 25\,000$. How many kilometres is 3.2 cm on the map?

7 Percents

✓ X

14 What percent of 64 is 48?

15 Rent rises from \$1600 and is now \$1720. Find the percent increase.

16 A bike is 40% off, then 15% off the sale price. What single discount is that?

8 Exponent laws

✓ X

17 Simplify $(3x^2)^3 \div (9x^4)$.

18 Evaluate 4^{-2} and $(-4)^0$.

9 Scientific notation

✓ X

19 Write 72 000 000 and 0.000 091 in scientific notation.

20 Evaluate $(5 \times 10^{-3})(6 \times 10^8)$ in scientific notation.

21 Which is greater: 8.1×10^{-6} or 2.4×10^{-5} ?

My traps Your three most likely mistakes, and how you will catch each one.

1 _____ 2 _____ 3 _____

Answers to the numbered prompts. Cover this strip until you are done.

1 natural, whole, integers, rational
2 -4: integer, rational; 0: whole, integer, rational; $7/3$: rational
3 $-1.3 < -5/4 < -1/5 < 0.2$
4 $-7 + 6 = -1$
5 Four negatives: positive, 42
6 $-7 - (-18) = 11$ m up
7 $-81 + 81 = 0$

8 $20 - (-2)(4) = 28$
9 $20/24 - 9/24 = 11/24$
10 $2/3 + 1/3 = 1$
11 $3 : 4; 49 : 28$
12 4 L: \$2.47/L vs \$2.65/L
13 80 000 cm = 0.8 km
14 $48 \div 64 \times 100 = 75$, so 75%

15 $120 \div 1600 \times 100 = 7.5$, so 7.5%
16 $0.6 \times 0.85 = 0.51$, so 49% off
17 $27x^6 \div (9x^4) = 3x^2$
18 $1/16$ and 1
19 7.2×10^7 and 9.1×10^{-5}
20 $30 \times 10^5 = 3.0 \times 10^6$
21 2.4×10^{-5} : its power of 10 is greater