

The cover of the 'High School Practice Packet, Spring 2021' features a central image of a chalkboard filled with mathematical equations, including the quadratic formula $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$. To the right of the chalkboard is a blue silhouette of the state of Texas with the text 'Texas UIL' in white. The background is decorated with green hexagons at the top and bottom, and a blue and white geometric pattern on the left side. The title 'High School Practice Packet' is written in a large, bold, black font, and 'Spring 2021' is written in a smaller, black font below it.

Spring 2021



NUMBER SENSE

Practice Packet S21

Written by

Larry White, Contest Director

We are a small company that listens! If you have any questions or if there is an area that you would like fully explored, let us hear from you. We hope you enjoy this product and stay in contact with us throughout your academic journey.

~ President Hexco Inc., Linda Tarrant

HEXCO ACADEMIC

www.hexco.com

P.O. Box 199 • Hunt, Texas 78024

Phone: 830.367.3825 • Fax: 830.367.3824

Email: hexco@hexco.com

Copyright © 2021 by Hexco Academic. All rights reserved. Reproduction or translation of any part of this work beyond that permitted by Section 107 or 108 of the 1976 *United States Copyright Act* without the permission of the copyright owner is unlawful. The purchaser of this product is responsible for adhering to this law which prohibits the sharing or reselling of copyrighted material with anyone. This precludes sharing with coaches or students from other schools via mail, fax, email, or simply "passing along." Hexco materials may not be posted online. Exception/permission for photocopies granted by Hexco Academic is only applicable for *Practice Packets* which may be copied expressly for the purchaser's group or classroom at the same physical location.

IF YOU LIKE THIS PRODUCT, WE ALSO RECOMMEND

Mental Math Notes

Number Sense Practice Packet F20

Number Sense Practice Packet S20

Number Sense Practice Packet F19

UIL NUMBER SENSE PRACTICE PACKET – Spring 2021



CONTENTS

Six Sets of Number Sense Tests (S21A-S21F)

Each Test Includes:

- 80 Questions - fill-in-the-blank
- Solutions

For official UIL Constitution and Contest Rules for Number Sense, please review the Section 920 document at:
<http://www.uil texas.org/academics/number-sense>

Hexco 2020-21 Number Sense Test S21C

Contestant's Number _____

Final	_____	_____
2nd	_____	_____
1st	_____	_____
Score	_____	Initials

Read directions carefully
before beginning test

DO NOT UNFOLD THIS SHEET
UNTIL TOLD TO BEGIN

Directions: Do not turn this page until the person conducting this test gives the signal to begin. This is a ten-minute test. There are 80 problems. Solve accurately and quickly as many as you can in the order in which they appear. ALL PROBLEMS ARE TO BE SOLVED MENTALLY. Make no calculations with paper and pencil. Write only the answer in the space provided at the end of each problem. Problems marked with a (*) require approximate integral answers; any answer to a starred problem that is within five percent of the exact answer will be scored correct; all other problems require exact answers.

The person conducting this contest should explain these directions to the contestants.

STOP -- WAIT FOR SIGNAL!

- | | |
|---|---|
| (1) $136 + 1015 - 21 =$ _____ | (18) $CMLXXI - DCXLV =$ _____ (Arabic Numeral) |
| (2) $1512 - 2235 + 51 =$ _____ | (19) If 4 CDs cost \$12.50, then 6 CDs cost \$ _____ |
| (3) $462 \div 11 =$ _____ | *(20) $257.1 \times 2193.1 =$ _____ |
| (4) $347 \times (11 - 18) =$ _____ | (21) $41612 \div 101 =$ _____ |
| (5) $\frac{2}{3} + \frac{5}{8} =$ _____ (improper fraction) | (22) $GCD(40, 64) \times LCM(40, 64) =$ _____ |
| (6) $.325 =$ _____ (proper fraction) | (23) The cube root of 250,047 is _____ |
| (7) 15% of \$56.00 = _____ | (24) 45% of $244\frac{4}{9} =$ _____ |
| (8) $5 \div (6 - 7) + 8 \times 9 =$ _____ | (25) 345 base 10 = _____ base 6 |
| (9) 3 yds — 1.5 ft + 5 in = _____ in | (26) 32% of 84 is 8% of = _____ |
| *(10) $2357 - 4689 + 1357 - 246 =$ _____ | (27) 0.1555... = _____ (fraction) |
| (11) $1123 \div 6$ has a remainder of _____ | (28) $28^2 + 78^2 =$ _____ |
| (12) Which is larger, $1\frac{8}{9}$ or 1.88? _____ | (29) If $2x + 5 = 3$, then $x - 4 =$ _____ |
| (13) $26^2 =$ _____ | *(30) $136101 \div 521 =$ _____ |
| (14) $54^2 =$ _____ | (31) How many odd integers are between 5 and 78? _____ |
| (15) 25% of 42 is _____ (decimal) | (32) How many days are there between Sept. 3, 2021 and Nov. 25, 2021? _____ |
| (16) $2\frac{2}{3} \div \frac{3}{8} =$ _____ | (33) The sum of the roots of $2x^2 - x - 3 = 0$ is _____ |
| (17) The LCM of 16, 40, and 64 is _____ | (34) What number times 12 gives the same result as that number added to 44? _____ |

Hexco 2020-21 Number Sense Test S21B Key

*number) $x - y$ means an integer between x and y inclusive

NOTE: If an answer is of the type like $\frac{2}{3}$ it cannot be written as a repeating decimal

- | | | | |
|---------------------------|--------------------------------|--|--|
| (1) 46,446 | (18) 5 | (35) 186 | (58) 6 |
| (2) 21,406 | (19) 4 | (36) 59 | (59) 9 |
| (3) $\frac{11}{39}$ | *(20) 2,317,193 —
2,561,107 | (37) 41 | *(60) 299,757 —
331,309 |
| (4) .72, $\frac{18}{25}$ | (21) 600 | (38) $-1.25, -\frac{5}{4},$
$-1\frac{1}{4}$ | (61) 8.6 |
| (5) $2\frac{13}{28}$ | (22) 7,290 | (39) 245 | (62) $\frac{161}{256}$ |
| (6) 2,030 | (23) 19 | *(40) 769 — 849 | (63) 600 |
| (7) $\frac{18}{25}$ | (24) 14,400 | (41) 5.29, $5\frac{29}{100}$ | (64) — 9 |
| (8) 210 | (25) 2 | (42) 11 | (65) 4 |
| (9) .1875, $\frac{3}{16}$ | (26) 312 | (43) 24 | (66) 1 |
| *(10) 4,893 — 5,407 | (27) 4 | (44) $-\frac{108}{23}, -4\frac{16}{23}$ | (67) 16 |
| (11) 729 | (28) 3,125 | (45) 7,663 | (68) 5 |
| (12) 18 | (29) $\frac{1}{9}$ | (46) 4,141 | (69) 1,260 |
| (13) $8\frac{1}{2}$ | *(30) 136 — 149 | (47) 30235 | *(70) 3,434 — 3,794 |
| (14) — 343 | (31) — 2 | (48) 140 | (71) 0 |
| (15) $12\frac{3}{16}$ | (32) 5,616 | (49) 71 | (72) 90,424 |
| (16) 2,304 | (33) \$510.00 | *(50) 319,836 —
353,503 | (73) 4 |
| (17) 12 | (34) $\frac{7}{330}$ | (51) — 2 | (74) 20 |
| | | (52) 33 | (75) 1 |
| | | (53) 729 | (76) 162,409 |
| | | (54) 9,984 | (77) $-4.5, -\frac{9}{2}, -4\frac{1}{2}$ |
| | | (55) 24 | (78) 70 |
| | | (56) 6 | (79) 4,220 |
| | | (57) 210 | *(80) 4,398 — 4,860 |