

Grade Level: 7th

Subject: Math

Unit Number and Title: U2 – One Variable Equations & Inequalities



IFD Planning Guide
(Math, Science, and Social Studies)

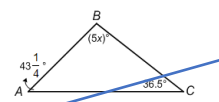
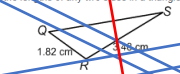
<p>PA # <u>1</u></p> <p>Mathematics Grade 7 Unit 02 PA 01</p> <p>Provide concrete models for students to select, as needed.</p> <p>Analyze the problem situation(s) described below. Organize and record your work for each of the following tasks. Using precise mathematical language, justify and explain each solution process.</p> <p>1. Consider the inequality below:</p> <p style="text-align: center;">$-2x + 6 > -17$</p> <p>a. Write a corresponding real-world problem that can be used to generate the inequality.</p> <p>b. Use concrete and/or pictorial models to solve the inequality.</p> <p>c. Solve the inequality algebraically and describe the meaning of the solution in the context of the generated problem situation.</p> <p>d. Represent the solution for the inequality on a number line.</p> <p>e. Evaluate the inequality for $x = 12.8$ to determine if the given value makes the inequality true.</p> <p>f. Describe how the generated real-world problem would change if $-2x + 6 > -17$ was changed to $-2x + 6 = -17$.</p> <p>g. Describe how the solution(s) represented on a number line would change if $-2x + 6 > -17$ was changed to $-2x + 6 = -17$.</p>	<p>Mini-Lesson Topics:</p> <p>One Variable Two Step Eqs. & Ineqs. <i>Model & solve one var two step eqs & ineqs</i> Concrete, pictorial models & algebraic representations</p> <p>Solutions for Eqs. & Ineqs. Represent eqs & ineqs on a # line Determine if solns make eqs & ineqs true Write eqs & ineqs to represent conditions & constraints Write real world problems to represent eqs & ineqs</p> <p>Eqs & Ineqs in Real World Problems <i>Monetary Incentives</i> Sales, rebates & coupons</p> <p>Financial Literacy Simple & Compound Interest Estimating Family Budgets</p>	<p>Notes/Resources:</p> <p>Go Math Book Chp. pp.</p> <p>TEKsing to STAAR Spiral Practice - 3rd Six weeks</p> <p>Step up to STAAR wkbk pp.</p> <p>TRS Assessment Creator Review Six Weeks Test</p> <p>Performance Assess. # 1 & 2</p> <p>Texas One Database</p> <p>Formative Assessment: Questioning Strategies Checkpoint #10</p> <p>Summative Assessment: District Benchmark # 2</p>
<p>TEKS (KS/SE):</p> <p>Standard(s): 7.1A, 7.B, 7.1C, 7.1D, 7.1E, 7.1G, 7.10B, 7.10C, 7.11A, 7.11B, 7.11C</p>		

Grade Level: 7th Subject: Math

Unit Number and Title: U2 – One Variable Equations & Inequalities



IFD Planning Guide
(Math, Science, and Social Studies)

PA # <u>2</u> :	Mini-Lesson Topics:	Notes/Resources:
<p>Performance Assessment(s)</p> <p>Mathematics Grade 7 Unit 02 PA 02</p> <p>Analyze the problem situation(s) described below. Organize and record your work for each of the following tasks. Using precise mathematical language, justify and explain each solution process.</p> <p>1. Sarah stated the value of x in triangle ABC is 20.</p>  <p>a. Using previous knowledge of the sum of the angles in a triangle, write an equation that can be used to determine the value of x.</p> <p>b. Solve the equation algebraically.</p> <p>c. Determine the measure of angle B.</p> <p>d. Evaluate the equation for the value Sarah gave for x to determine if the given value makes the equation true.</p> <p>2. The Triangle Inequality Theorem states that the sum of the lengths of any two sides in a triangle must be greater than the length of the third side.</p>  <p>a. Write an inequality that can be used to determine the possible lengths of QS in triangle QRS.</p> <p>b. Can the length of QS be 5.3 cm so that QRS satisfies the conditions of a triangle?</p>	<p>One Variable Two Step Eqs. & Ineqs. <i>Model & solve one var two step eqs & ineqs</i> Concrete, pictorial models & algebraic representations</p> <p>Solutions for Eqs. & Ineqs. Represent eqs & ineqs on a # line Determine if solns make eqs & ineqs true Write eqs & ineqs to represent conditions & constraints Write real world problems to represent eqs & ineqs</p> <p>Write & Solve Eqs using Geo. Concepts <i>Angles</i> Complementary & Supplementary <'s Straight angles, adjacent angles Vertical angles <i>Sum of the angles in a triangle</i></p> <p>Eqs & Ineqs in Real World Problems <i>Monetary Incentives</i> Sales, rebates & coupons</p> <p>Financial Literacy Simple & Compound Interest Estimating Family Budgets</p>	<p>Go Math Book Chp. pp.</p> <p>TEKs to STAAR Spiral Practice - 3rd Six weeks</p> <p>Step up to STAAR wkbk pp.</p> <p>TRS Assessment Creator Review Six Weeks Test</p> <p>Performance Assess. # 1 & 2</p> <p>Texas One Database</p> <p>Formative Assessment: Questioning Strategies Checkpoint #10</p> <p>Summative Assessment: District Benchmark # 2</p>
<p>TEKS (KS/SE):</p> <p>Standard(s): 7.1A, 7.B, 7.1C, 7.1D, 7.1E, 7.1G, 7.10A, 7.10B, 7.10C, 7.11A, 7.11B, 7.11C</p>		

Planning Guide with the Performance Assessments

Grade Level: 7th Subject: MATH Unit Number and Title: U2 - one variable Eqs & Inequalities

TEKS RESOURCE SYSTEM IFD Planning Guide – Math, Science or Social Studies

PA # 1 & PA # 2 16 days for U2

Performance Assessment(s)
Mathematics Grade 7 Unit 02 PA 01
 Provide concrete models for students to select, as needed.
 Analyze the problem situation(s) described below. Organize and record your work for each of the following tasks. Using precise mathematical language, justify and explain each solution process.

1. Consider the inequality below: $-2x + 6 \geq -17$

- Write a corresponding real-world problem that can be used to generate the inequality.
- Use concrete and/or pictorial models to solve the inequality.
- Solve the inequality algebraically and describe the meaning of the solution in the context of the generated problem situation.
- Represent the solution for the inequality on a number line.
- Evaluate the inequality for $x = 12.6$ to determine if the given value makes the inequality true.
- Describe how the generated real-world problem would change if $-2x + 6 \geq -17$ was changed to $-2x + 5 \geq -17$.
- Describe how the solution(s) represented on a number line would change if $-2x + 6 \geq -17$ was changed to $-2x + 5 \geq -17$.

- Write an inequality that can be used to determine the possible lengths of \overline{QS} in triangle QRS .
- Can the length of \overline{QS} be 5.3 cm so that QRS satisfies the conditions of a triangle?

TEKS (KS/SE):

Standards) 7.1A, 7.1B, 7.1C, 7.1D, 7.1E, 7.1F, 7.1G, 7.1H, 7.1I, 7.1J, 7.1K, 7.1L, 7.1M, 7.1N, 7.1O, 7.1P, 7.1Q, 7.1R, 7.1S, 7.1T, 7.1U, 7.1V, 7.1W, 7.1X, 7.1Y, 7.1Z, 7.1AA, 7.1AB, 7.1AC, 7.1AD, 7.1AE, 7.1AF, 7.1AG, 7.1AH, 7.1AI, 7.1AJ, 7.1AK, 7.1AL, 7.1AM, 7.1AN, 7.1AO, 7.1AP, 7.1AQ, 7.1AR, 7.1AS, 7.1AT, 7.1AU, 7.1AV, 7.1AW, 7.1AX, 7.1AY, 7.1AZ, 7.1BA, 7.1BB, 7.1BC, 7.1BD, 7.1BE, 7.1BF, 7.1BG, 7.1BH, 7.1BI, 7.1BJ, 7.1BK, 7.1BL, 7.1BM, 7.1BN, 7.1BO, 7.1BP, 7.1BQ, 7.1BR, 7.1BS, 7.1BT, 7.1BU, 7.1BV, 7.1BW, 7.1BX, 7.1BY, 7.1BZ, 7.1CA, 7.1CB, 7.1CC, 7.1CD, 7.1CE, 7.1CF, 7.1CG, 7.1CH, 7.1CI, 7.1CJ, 7.1CK, 7.1CL, 7.1CM, 7.1CN, 7.1CO, 7.1CP, 7.1CQ, 7.1CR, 7.1CS, 7.1CT, 7.1CU, 7.1CV, 7.1CW, 7.1CX, 7.1CY, 7.1CZ, 7.1DA, 7.1DB, 7.1DC, 7.1DD, 7.1DE, 7.1DF, 7.1DG, 7.1DH, 7.1DI, 7.1DJ, 7.1DK, 7.1DL, 7.1DM, 7.1DN, 7.1DO, 7.1DP, 7.1DQ, 7.1DR, 7.1DS, 7.1DT, 7.1DU, 7.1DV, 7.1DW, 7.1DX, 7.1DY, 7.1DZ, 7.1EA, 7.1EB, 7.1EC, 7.1ED, 7.1EE, 7.1EF, 7.1EG, 7.1EH, 7.1EI, 7.1EJ, 7.1EK, 7.1EL, 7.1EM, 7.1EN, 7.1EO, 7.1EP, 7.1EQ, 7.1ER, 7.1ES, 7.1ET, 7.1EU, 7.1EV, 7.1EW, 7.1EX, 7.1EY, 7.1EZ, 7.1FA, 7.1FB, 7.1FC, 7.1FD, 7.1FE, 7.1FF, 7.1FG, 7.1FH, 7.1FI, 7.1FJ, 7.1FK, 7.1FL, 7.1FM, 7.1FN, 7.1FO, 7.1FP, 7.1FQ, 7.1FR, 7.1FS, 7.1FT, 7.1FU, 7.1FV, 7.1FW, 7.1FX, 7.1FY, 7.1FZ, 7.1GA, 7.1GB, 7.1GC, 7.1GD, 7.1GE, 7.1GF, 7.1GG, 7.1GH, 7.1GI, 7.1GJ, 7.1GK, 7.1GL, 7.1GM, 7.1GN, 7.1GO, 7.1GP, 7.1GQ, 7.1GR, 7.1GS, 7.1GT, 7.1GU, 7.1GV, 7.1GW, 7.1GX, 7.1GY, 7.1GZ, 7.1HA, 7.1HB, 7.1HC, 7.1HD, 7.1HE, 7.1HF, 7.1HG, 7.1HH, 7.1HI, 7.1HJ, 7.1HK, 7.1HL, 7.1HM, 7.1HN, 7.1HO, 7.1HP, 7.1HQ, 7.1HR, 7.1HS, 7.1HT, 7.1HU, 7.1HV, 7.1HW, 7.1HX, 7.1HY, 7.1HZ, 7.1IA, 7.1IB, 7.1IC, 7.1ID, 7.1IE, 7.1IF, 7.1IG, 7.1IH, 7.1II, 7.1IJ, 7.1IK, 7.1IL, 7.1IM, 7.1IN, 7.1IO, 7.1IP, 7.1IQ, 7.1IR, 7.1IS, 7.1IT, 7.1IU, 7.1IV, 7.1IW, 7.1IX, 7.1IY, 7.1IZ, 7.1JA, 7.1JB, 7.1JC, 7.1JD, 7.1JE, 7.1JF, 7.1JG, 7.1JH, 7.1JI, 7.1JJ, 7.1JK, 7.1JL, 7.1JM, 7.1JN, 7.1JO, 7.1JP, 7.1JQ, 7.1JR, 7.1JS, 7.1JT, 7.1JU, 7.1JV, 7.1JW, 7.1JX, 7.1JY, 7.1JZ, 7.1KA, 7.1KB, 7.1KC, 7.1KD, 7.1KE, 7.1KF, 7.1KG, 7.1KH, 7.1KI, 7.1KJ, 7.1KK, 7.1KL, 7.1KM, 7.1KN, 7.1KO, 7.1KP, 7.1KQ, 7.1KR, 7.1KS, 7.1KT, 7.1KU, 7.1KV, 7.1KW, 7.1KX, 7.1KY, 7.1KZ, 7.1LA, 7.1LB, 7.1LC, 7.1LD, 7.1LE, 7.1LF, 7.1LG, 7.1LH, 7.1LI, 7.1LJ, 7.1LK, 7.1LL, 7.1LM, 7.1LN, 7.1LO, 7.1LP, 7.1LQ, 7.1LR, 7.1LS, 7.1LT, 7.1LU, 7.1LV, 7.1LW, 7.1LX, 7.1LY, 7.1LZ, 7.1MA, 7.1MB, 7.1MC, 7.1MD, 7.1ME, 7.1MF, 7.1MG, 7.1MH, 7.1MI, 7.1MJ, 7.1MK, 7.1ML, 7.1MN, 7.1MO, 7.1MP, 7.1MQ, 7.1MR, 7.1MS, 7.1MT, 7.1MU, 7.1MV, 7.1MW, 7.1MX, 7.1MY, 7.1MZ, 7.1NA, 7.1NB, 7.1NC, 7.1ND, 7.1NE, 7.1NF, 7.1NG, 7.1NH, 7.1NI, 7.1NJ, 7.1NK, 7.1NL, 7.1NM, 7.1NO, 7.1NP, 7.1NQ, 7.1NR, 7.1NS, 7.1NT, 7.1NU, 7.1NV, 7.1NW, 7.1NX, 7.1NY, 7.1NZ, 7.1OA, 7.1OB, 7.1OC, 7.1OD, 7.1OE, 7.1OF, 7.1OG, 7.1OH, 7.1OI, 7.1OJ, 7.1OK, 7.1OL, 7.1OM, 7.1ON, 7.1OO, 7.1OP, 7.1OQ, 7.1OR, 7.1OS, 7.1OT, 7.1OU, 7.1OV, 7.1OW, 7.1OX, 7.1OY, 7.1OZ, 7.1PA, 7.1PB, 7.1PC, 7.1PD, 7.1PE, 7.1PF, 7.1PG, 7.1PH, 7.1PI, 7.1PJ, 7.1PK, 7.1PL, 7.1PM, 7.1PN, 7.1PO, 7.1PP, 7.1PQ, 7.1PR, 7.1PS, 7.1PT, 7.1PU, 7.1PV, 7.1PW, 7.1PX, 7.1PY, 7.1PZ, 7.1QA, 7.1QB, 7.1QC, 7.1QD, 7.1QE, 7.1QF, 7.1QG, 7.1QH, 7.1QI, 7.1QJ, 7.1QK, 7.1QL, 7.1QM, 7.1QN, 7.1QO, 7.1QP, 7.1QQ, 7.1QR, 7.1QS, 7.1QT, 7.1QU, 7.1QV, 7.1QW, 7.1QX, 7.1QY, 7.1QZ, 7.1RA, 7.1RB, 7.1RC, 7.1RD, 7.1RE, 7.1RF, 7.1RG, 7.1RH, 7.1RI, 7.1RJ, 7.1RK, 7.1RL, 7.1RM, 7.1RN, 7.1RO, 7.1RP, 7.1RQ, 7.1RR, 7.1RS, 7.1RT, 7.1RU, 7.1RV, 7.1RW, 7.1RX, 7.1RY, 7.1RZ, 7.1SA, 7.1SB, 7.1SC, 7.1SD, 7.1SE, 7.1SF, 7.1SG, 7.1SH, 7.1SI, 7.1SJ, 7.1SK, 7.1SL, 7.1SM, 7.1SN, 7.1SO, 7.1SP, 7.1SQ, 7.1SR, 7.1SS, 7.1ST, 7.1SU, 7.1SV, 7.1SW, 7.1SX, 7.1SY, 7.1SZ, 7.1TA, 7.1TB, 7.1TC, 7.1TD, 7.1TE, 7.1TF, 7.1TG, 7.1TH, 7.1TI, 7.1TJ, 7.1TK, 7.1TL, 7.1TM, 7.1TN, 7.1TO, 7.1TP, 7.1TQ, 7.1TR, 7.1TS, 7.1TT, 7.1TU, 7.1TV, 7.1TW, 7.1TX, 7.1TY, 7.1TZ, 7.1UA, 7.1UB, 7.1UC, 7.1UD, 7.1UE, 7.1UF, 7.1UG, 7.1UH, 7.1UI, 7.1UJ, 7.1UK, 7.1UL, 7.1UM, 7.1UN, 7.1UO, 7.1UP, 7.1UQ, 7.1UR, 7.1US, 7.1UT, 7.1UU, 7.1UV, 7.1UW, 7.1UX, 7.1UY, 7.1UZ, 7.1VA, 7.1VB, 7.1VC, 7.1VD, 7.1VE, 7.1VF, 7.1VG, 7.1VH, 7.1VI, 7.1VJ, 7.1VK, 7.1VL, 7.1VM, 7.1VN, 7.1VO, 7.1VP, 7.1VQ, 7.1VR, 7.1VS, 7.1VT, 7.1VU, 7.1VV, 7.1VW, 7.1VX, 7.1VY, 7.1VZ, 7.1WA, 7.1WB, 7.1WC, 7.1WD, 7.1WE, 7.1WF, 7.1WG, 7.1WH, 7.1WI, 7.1WJ, 7.1WK, 7.1WL, 7.1WM, 7.1WN, 7.1WO, 7.1WP, 7.1WQ, 7.1WR, 7.1WS, 7.1WT, 7.1WU, 7.1WV, 7.1WW, 7.1WX, 7.1WY, 7.1WZ, 7.1XA, 7.1XB, 7.1XC, 7.1XD, 7.1XE, 7.1XF, 7.1XG, 7.1XH, 7.1XI, 7.1XJ, 7.1XK, 7.1XL, 7.1XM, 7.1XN, 7.1XO, 7.1XP, 7.1XQ, 7.1XR, 7.1XS, 7.1XT, 7.1XU, 7.1XV, 7.1XW, 7.1XX, 7.1XY, 7.1XZ, 7.1YA, 7.1YB, 7.1YC, 7.1YD, 7.1YE, 7.1YF, 7.1YG, 7.1YH, 7.1YI, 7.1YJ, 7.1YK, 7.1YL, 7.1YM, 7.1YN, 7.1YO, 7.1YP, 7.1YQ, 7.1YR, 7.1YS, 7.1YT, 7.1YU, 7.1YV, 7.1YW, 7.1YX, 7.1YY, 7.1YZ, 7.1ZA, 7.1ZB, 7.1ZC, 7.1ZD, 7.1ZE, 7.1ZF, 7.1ZG, 7.1ZH, 7.1ZI, 7.1ZJ, 7.1ZK, 7.1ZL, 7.1ZM, 7.1ZN, 7.1ZO, 7.1ZP, 7.1ZQ, 7.1ZR, 7.1ZS, 7.1ZT, 7.1ZU, 7.1ZV, 7.1ZW, 7.1ZX, 7.1ZY, 7.1ZZ

PA # 2

Mini-Lesson Topics:

ONE variable, 2 step Eqs & INEQs

- model & solve 2 step (7.11A) Eqs & INEQs 7.10C (7.11A)
- use conc & pictorial (7.11B) models to represent (7.10B) algebraic concepts

Solutions for Eqs & INEQs

- repres. Eqs & INEQs on #line
- Determine if solns make Eqs & INEQs true
- write Eqs & INEQs to represent conditions & constraints
- write real wld problems to represent Eqs & INEQs

Write & SOLVE Eqs USING Geometric Concepts

- Angles & their properties
- Angle Sum Theorem
- Triangle INEQ Thm.

Notes/Resources:

- GO MATH BOOK
- Chp 3. PP.
- TEKSing to START
- spiral practice - 1st weeks
- STEP UP TO START WK BOOK
- secs: 2, 3, 5
- TRS Assessment Creator
- Review
- Unit Test
- Performance Assessment PA #1 & PA #2
- Texas one Data base (START ONE)
- Formative Assessment
- Questioning strategies
- CK 12 #2
- Summative Assessment
- Six wks Test

Planning Guide with the Performance Assessments

Unit Number and Title: U2 - One variable Eqs & Inequalities

Guide - Math, Science or Social Studies

Mini-Lesson Topics:	Notes/Resources:
<p><u>ONE Variable, 2 Step Eqs & INEQs</u></p> <ul style="list-style-type: none"> - Model & solve 2 step (7.11A) Eqs & INEQs 7.10C (7.1A) - use conc & pictorial (7.11A) models to represent (7.10B) algebraic concepts <p><u>Solutions for Eqs & INEQs</u></p> <ul style="list-style-type: none"> - repres. Eqs & INEQs on #line - Determine if solns make Eqs & INEQs true - write Eqs & INEQs to represent conditions & constraints - write real world problems to represent Eqs & INEQs 	<ul style="list-style-type: none"> • GO MATH BOOK - Chp 3 - pp. • TEKSing to STAAR - spiral practice - 1st books • STEP UP TO STAAR WK BOOK - secs: 2, 3, 5 • TRS Assessment Creator - Review - Unit Test • Performance Assessment PA #1 & PA #2 • Texas one Data base (STAAR ONE) • Formative Assessment - Questioning strategies - CKPT #2 • Summative Assessment - Six Wks Test
<p>EKS (KS/SE):</p> <p>Standards: 7.1A, 7.1B, 7.1C, 7.1D, 7.1E, 7.1F, 7.1G, 7.1H, 7.1I, 7.1J, 7.1K, 7.1L, 7.1M, 7.1N, 7.1O, 7.1P, 7.1Q, 7.1R, 7.1S, 7.1T, 7.1U, 7.1V, 7.1W, 7.1X, 7.1Y, 7.1Z, 7.1AA, 7.1AB, 7.1AC, 7.1AD, 7.1AE, 7.1AF, 7.1AG, 7.1AH, 7.1AI, 7.1AJ, 7.1AK, 7.1AL, 7.1AM, 7.1AN, 7.1AO, 7.1AP, 7.1AQ, 7.1AR, 7.1AS, 7.1AT, 7.1AU, 7.1AV, 7.1AW, 7.1AX, 7.1AY, 7.1AZ, 7.1BA, 7.1BB, 7.1BC, 7.1BD, 7.1BE, 7.1BF, 7.1BG, 7.1BH, 7.1BI, 7.1BJ, 7.1BK, 7.1BL, 7.1BM, 7.1BN, 7.1BO, 7.1BP, 7.1BQ, 7.1BR, 7.1BS, 7.1BT, 7.1BU, 7.1BV, 7.1BW, 7.1BX, 7.1BY, 7.1BZ, 7.1CA, 7.1CB, 7.1CC, 7.1CD, 7.1CE, 7.1CF, 7.1CG, 7.1CH, 7.1CI, 7.1CJ, 7.1CK, 7.1CL, 7.1CM, 7.1CN, 7.1CO, 7.1CP, 7.1CQ, 7.1CR, 7.1CS, 7.1CT, 7.1CU, 7.1CV, 7.1CW, 7.1CX, 7.1CY, 7.1CZ, 7.1DA, 7.1DB, 7.1DC, 7.1DD, 7.1DE, 7.1DF, 7.1DG, 7.1DH, 7.1DI, 7.1DJ, 7.1DK, 7.1DL, 7.1DM, 7.1DN, 7.1DO, 7.1DP, 7.1DQ, 7.1DR, 7.1DS, 7.1DT, 7.1DU, 7.1DV, 7.1DW, 7.1DX, 7.1DY, 7.1DZ, 7.1EA, 7.1EB, 7.1EC, 7.1ED, 7.1EE, 7.1EF, 7.1EG, 7.1EH, 7.1EI, 7.1EJ, 7.1EK, 7.1EL, 7.1EM, 7.1EN, 7.1EO, 7.1EP, 7.1EQ, 7.1ER, 7.1ES, 7.1ET, 7.1EU, 7.1EV, 7.1EW, 7.1EX, 7.1EY, 7.1EZ, 7.1FA, 7.1FB, 7.1FC, 7.1FD, 7.1FE, 7.1FF, 7.1FG, 7.1FH, 7.1FI, 7.1FJ, 7.1FK, 7.1FL, 7.1FM, 7.1FN, 7.1FO, 7.1FP, 7.1FQ, 7.1FR, 7.1FS, 7.1FT, 7.1FU, 7.1FV, 7.1FW, 7.1FX, 7.1FY, 7.1FZ, 7.1GA, 7.1GB, 7.1GC, 7.1GD, 7.1GE, 7.1GF, 7.1GG, 7.1GH, 7.1GI, 7.1GJ, 7.1GK, 7.1GL, 7.1GM, 7.1GN, 7.1GO, 7.1GP, 7.1GQ, 7.1GR, 7.1GS, 7.1GT, 7.1GU, 7.1GV, 7.1GW, 7.1GX, 7.1GY, 7.1GZ, 7.1HA, 7.1HB, 7.1HC, 7.1HD, 7.1HE, 7.1HF, 7.1HG, 7.1HH, 7.1HI, 7.1HJ, 7.1HK, 7.1HL, 7.1HM, 7.1HN, 7.1HO, 7.1HP, 7.1HQ, 7.1HR, 7.1HS, 7.1HT, 7.1HU, 7.1HV, 7.1HW, 7.1HX, 7.1HY, 7.1HZ, 7.1IA, 7.1IB, 7.1IC, 7.1ID, 7.1IE, 7.1IF, 7.1IG, 7.1IH, 7.1II, 7.1IJ, 7.1IK, 7.1IL, 7.1IM, 7.1IN, 7.1IO, 7.1IP, 7.1IQ, 7.1IR, 7.1IS, 7.1IT, 7.1IU, 7.1IV, 7.1IW, 7.1IX, 7.1IY, 7.1IZ, 7.1JA, 7.1JB, 7.1JC, 7.1JD, 7.1JE, 7.1JF, 7.1JG, 7.1JH, 7.1JI, 7.1JJ, 7.1JK, 7.1JL, 7.1JM, 7.1JN, 7.1JO, 7.1JP, 7.1JQ, 7.1JR, 7.1JS, 7.1JT, 7.1JU, 7.1JV, 7.1JW, 7.1JX, 7.1JY, 7.1JZ, 7.1KA, 7.1KB, 7.1KC, 7.1KD, 7.1KE, 7.1KF, 7.1KG, 7.1KH, 7.1KI, 7.1KJ, 7.1KK, 7.1KL, 7.1KM, 7.1KN, 7.1KO, 7.1KP, 7.1KQ, 7.1KR, 7.1KS, 7.1KT, 7.1KU, 7.1KV, 7.1KW, 7.1KX, 7.1KY, 7.1KZ, 7.1LA, 7.1LB, 7.1LC, 7.1LD, 7.1LE, 7.1LF, 7.1LG, 7.1LH, 7.1LI, 7.1LJ, 7.1LK, 7.1LL, 7.1LM, 7.1LN, 7.1LO, 7.1LP, 7.1LQ, 7.1LR, 7.1LS, 7.1LT, 7.1LU, 7.1LV, 7.1LW, 7.1LX, 7.1LY, 7.1LZ, 7.1MA, 7.1MB, 7.1MC, 7.1MD, 7.1ME, 7.1MF, 7.1MG, 7.1MH, 7.1MI, 7.1MJ, 7.1MK, 7.1ML, 7.1MN, 7.1MO, 7.1MP, 7.1MQ, 7.1MR, 7.1MS, 7.1MT, 7.1MU, 7.1MV, 7.1MW, 7.1MX, 7.1MY, 7.1MZ, 7.1NA, 7.1NB, 7.1NC, 7.1ND, 7.1NE, 7.1NF, 7.1NG, 7.1NH, 7.1NI, 7.1NJ, 7.1NK, 7.1NL, 7.1NM, 7.1NO, 7.1NP, 7.1NQ, 7.1NR, 7.1NS, 7.1NT, 7.1NU, 7.1NV, 7.1NW, 7.1NX, 7.1NY, 7.1NZ, 7.1OA, 7.1OB, 7.1OC, 7.1OD, 7.1OE, 7.1OF, 7.1OG, 7.1OH, 7.1OI, 7.1OJ, 7.1OK, 7.1OL, 7.1OM, 7.1ON, 7.1OO, 7.1OP, 7.1OQ, 7.1OR, 7.1OS, 7.1OT, 7.1OU, 7.1OV, 7.1OW, 7.1OX, 7.1OY, 7.1OZ, 7.1PA, 7.1PB, 7.1PC, 7.1PD, 7.1PE, 7.1PF, 7.1PG, 7.1PH, 7.1PI, 7.1PJ, 7.1PK, 7.1PL, 7.1PM, 7.1PN, 7.1PO, 7.1PP, 7.1PQ, 7.1PR, 7.1PS, 7.1PT, 7.1PU, 7.1PV, 7.1PW, 7.1PX, 7.1PY, 7.1PZ, 7.1QA, 7.1QB, 7.1QC, 7.1QD, 7.1QE, 7.1QF, 7.1QG, 7.1QH, 7.1QI, 7.1QJ, 7.1QK, 7.1QL, 7.1QM, 7.1QN, 7.1QO, 7.1QP, 7.1QQ, 7.1QR, 7.1QS, 7.1QT, 7.1QU, 7.1QV, 7.1QW, 7.1QX, 7.1QY, 7.1QZ, 7.1RA, 7.1RB, 7.1RC, 7.1RD, 7.1RE, 7.1RF, 7.1RG, 7.1RH, 7.1RI, 7.1RJ, 7.1RK, 7.1RL, 7.1RM, 7.1RN, 7.1RO, 7.1RP, 7.1RQ, 7.1RR, 7.1RS, 7.1RT, 7.1RU, 7.1RV, 7.1RW, 7.1RX, 7.1RY, 7.1RZ, 7.1SA, 7.1SB, 7.1SC, 7.1SD, 7.1SE, 7.1SF, 7.1SG, 7.1SH, 7.1SI, 7.1SJ, 7.1SK, 7.1SL, 7.1SM, 7.1SN, 7.1SO, 7.1SP, 7.1SQ, 7.1SR, 7.1SS, 7.1ST, 7.1SU, 7.1SV, 7.1SW, 7.1SX, 7.1SY, 7.1SZ, 7.1TA, 7.1TB, 7.1TC, 7.1TD, 7.1TE, 7.1TF, 7.1TG, 7.1TH, 7.1TI, 7.1TJ, 7.1TK, 7.1TL, 7.1TM, 7.1TN, 7.1TO, 7.1TP, 7.1TQ, 7.1TR, 7.1TS, 7.1TT, 7.1TU, 7.1TV, 7.1TW, 7.1TX, 7.1TY, 7.1TZ, 7.1UA, 7.1UB, 7.1UC, 7.1UD, 7.1UE, 7.1UF, 7.1UG, 7.1UH, 7.1UI, 7.1UJ, 7.1UK, 7.1UL, 7.1UM, 7.1UN, 7.1UO, 7.1UP, 7.1UQ, 7.1UR, 7.1US, 7.1UT, 7.1UU, 7.1UV, 7.1UW, 7.1UX, 7.1UY, 7.1UZ, 7.1VA, 7.1VB, 7.1VC, 7.1VD, 7.1VE, 7.1VF, 7.1VG, 7.1VH, 7.1VI, 7.1VJ, 7.1VK, 7.1VL, 7.1VM, 7.1VN, 7.1VO, 7.1VP, 7.1VQ, 7.1VR, 7.1VS, 7.1VT, 7.1VU, 7.1VV, 7.1VW, 7.1VX, 7.1VY, 7.1VZ, 7.1WA, 7.1WB, 7.1WC, 7.1WD, 7.1WE, 7.1WF, 7.1WG, 7.1WH, 7.1WI, 7.1WJ, 7.1WK, 7.1WL, 7.1WM, 7.1WN, 7.1WO, 7.1WP, 7.1WQ, 7.1WR, 7.1WS, 7.1WT, 7.1WU, 7.1WV, 7.1WW, 7.1WX, 7.1WY, 7.1WZ, 7.1XA, 7.1XB, 7.1XC, 7.1XD, 7.1XE, 7.1XF, 7.1XG, 7.1XH, 7.1XI, 7.1XJ, 7.1XK, 7.1XL, 7.1XM, 7.1XN, 7.1XO, 7.1XP, 7.1XQ, 7.1XR, 7.1XS, 7.1XT, 7.1XU, 7.1XV, 7.1XW, 7.1XX, 7.1XY, 7.1XZ, 7.1YA, 7.1YB, 7.1YC, 7.1YD, 7.1YE, 7.1YF, 7.1YG, 7.1YH, 7.1YI, 7.1YJ, 7.1YK, 7.1YL, 7.1YM, 7.1YN, 7.1YO, 7.1YP, 7.1YQ, 7.1YR, 7.1YS, 7.1YT, 7.1YU, 7.1YV, 7.1YW, 7.1YX, 7.1YY, 7.1YZ, 7.1ZA, 7.1ZB, 7.1ZC, 7.1ZD, 7.1ZE, 7.1ZF, 7.1ZG, 7.1ZH, 7.1ZI, 7.1ZJ, 7.1ZK, 7.1ZL, 7.1ZM, 7.1ZN, 7.1ZO, 7.1ZP, 7.1ZQ, 7.1ZR, 7.1ZS, 7.1ZT, 7.1ZU, 7.1ZV, 7.1ZW, 7.1ZX, 7.1ZY, 7.1ZZ</p> <p>PA #1</p> <p>PA #2</p>	

Sample Timeline

Week 1 – BIG IDEA(S): EXPRESSIONS, EQUATIONS & RELATIONSHIPS				
Model and solve one-variable, two-step equations and inequalities with concrete and pictorial models and algebraic representations 7.11A (R) .	Find solutions to equations and inequalities by representing them on number line. 7.10B (S) Determine if given values make 1 variable 2 step equations & inequalities true 7.11B (S)	Solve one-variable, two-step equations and inequalities 7.11A (R) Write a real world problem given a one-variable, two-step equation or inequality 7.10C (S)	Write one-variable, two-step equations and inequalities to represent constraints or conditions 7.10A (S)	Formative Assessments: Observe students modeling, representing & solving 1 variable two step equations & Inequalities 7.10A, 7.10B, 7.10C, 7.11A
Week 2 – BIG IDEA(S): EXPRESSIONS, EQUATIONS & RELATIONSHIPS				

5 mins. block of time

State the learning
and language
objectives
Problem of the Day
Engage: Video, Rap
Song, Fluency Activ.

5 mins. block of time

Introduce notes via
foldable, Journaling
Etc..

10 mins. block of time

Model POD problems
Spiral Reviews
Introduce Math Concept & Skills
Model Problems in Journals
Partner Pair Practice

15 mins. block of time

Guided Support
“I Do, We do, You Do”
Formative Assessment Activities
Questioning Strategies
Begin Independent practice
Check in class some problem sets

5 mins. block of time

Review & Reteach
TEKS or subskills not
mastered
Check for knowledge
transfer

5 mins. block of time

Lesson Closure
Review Learning
Objectives
Exit Ticket

Planning Guide with the Performance Assessments

Week 1 - BIG IDEA(S) Expressions, Equations & Relationships (Unit 2) 16 Days				
Model & Solve One variable EQs 2 step EQs & InEQs Using circ & p.c. Models 7.11A (R)	Represent EQs & InEQs on a number line (7.10B) 7.10A (S)	Model & Solve 1 variable 2 step EQs write 1 variable 2 step EQs & InEQs 7.10A (S) 7.11A (A)	Write a Real world problem using a 2 step EQ or InEQ to Repres Conditions & Constraints 7.13A (S) (7.10A) S	Formatively Assess Modeling, Representing & Solving 2 step EQs & InEQs. 7.10B, 7.10A, 7.11A (R)
Week 2 - BIG IDEA(S) Expression, Equations & Relationships				
Determine if values make 1 var 2 step EQs & InEQs True 7.11B (S)	Write 1 variable 2 step Inequality to represent condition & constraints 7.10A (S) 7.11E (S) 2 step InEQs	RETEACH 7.11A & 7.11B Model & solve 1 var 2 step EQ & InEQs Determining given value 7.11A (R) 7.11B (S)	Write Real world problems involving EQs & InEQs with sales, rebates & coupons 7.13F (S) 7.10C (S)	District ckpoint P-BA #1 7.10A, 7.10B, 7.11A, 7.11B Summative Assess
Week 3 - BIG IDEA(S) Equations, Inequalities & Geometric Relationships				
Review PBA 1 with sts & model readiness problems missed. Heath & Remediation	Classifying Angles & their properties 7.11C (S)	Angles & their relationships / props. - Compl. & Supple <s - Straight <s - Vertical <s - Adjacent Angles 7.11C (S)	Angle Sum Theorem - Sum of the <s of any Δ is equal to 180° 7.11C (S)	Review for unit Assessment, Perf. Assessment OR District ck pt #2

Haberman's Characteristics of Successful Teachers in High-Poverty Schools

Haberman spelled out some of the tools of an effective teacher in a hard-to-staff school.

Those unique educators distinguish themselves by their

- persistence.
- physical and emotional stamina.
- caring relationships with students.
- commitment to acknowledging and appreciating student effort.
- willingness to admit mistakes.
- focus on in-depth learning.

- commitment to inclusion.
- organizational skills.

In addition, successful teachers in high-poverty schools

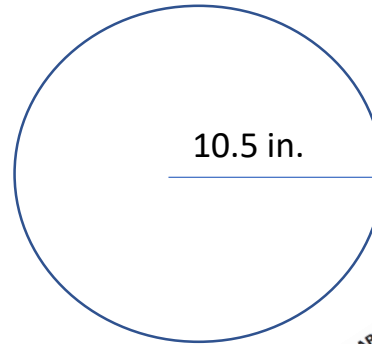
- protect student learning.
- translate theory and research into practice.
- cope with the bureaucracy.
- create student ownership.

- engage parents and caregivers as partners in student learning.
- support accountability for at-risk students' learning.

Basic formula skill set

- Find the circumference of a circle that has a radius of 10.5 inches. (Use $\pi = 3.14$)

- A 13.64 in.
- B 32.97 in.
- C 65.94 in.
- D 165.94 in.



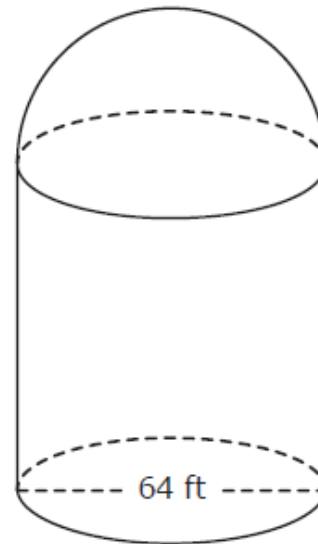
Applying formula skill sets

- The circumference of a circle is approximately 11.5 cm. What would the diameter of the circle? ($\pi = 22/7$)
- A 1.83 cm.
- B 3.66 cm.
- C 5.75cm.
- D 23 cm.



Transfer of skill set

- 2 An observatory is shaped like a cylinder standing on one of its bases with a dome on top. The diameter of the floor of the observatory is 64 feet, as shown in the diagram.



STAAR GRADE 7 MATHEMATICS REFERENCE MATERIALS



LINEAR EQUATIONS

Slope-intercept form $y = mx + b$

Constant of proportionality $k = \frac{y}{x}$

CIRCLE

Circle $C = 2\pi r$ or $C = \pi d$

AREA

Triangle $A = \frac{1}{2}bh$

Rectangle or parallelogram $A = bh$

Trapezoid $A = \frac{1}{2}(b_1 + b_2)h$

Circle $A = \pi r^2$

VOLUME

Prism $V = Bh$

Pyramid $V = \frac{1}{3}Bh$

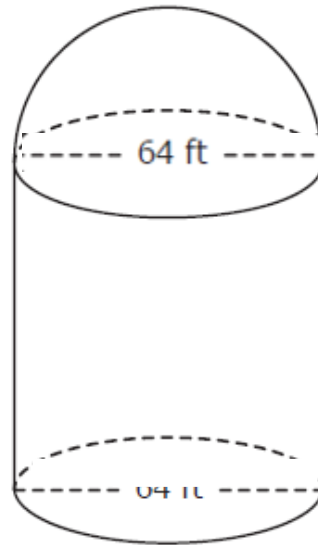


Which measurement is closest to the circumference of the base of the observatory in feet?

- F 200.96 ft
- G 3,215.36 ft
- H 100.48 ft
- J 401.92 ft

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STAAR GRADE 7 MATHEMATICS REFERENCE MATERIALS



LINEAR EQUATIONS

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STAAR Items in A Box

STAAR 2018

8.3C – 3 (R)

thirteen X

- 29 A square with a perimeter of 20 units is graphed on a coordinate grid. The square is dilated by a scale factor of 0.4 with the origin as the center of dilation.

If (x, y) represents the location of any point on the original square, which ordered pair represents the coordinates of the corresponding point on the resulting square?

- A $(20x, 20y)$
- B $(0.4x, 0.4y)$
- C $(x + 20, y + 20)$
- D $(x + 0.4, y + 0.4)$

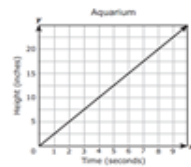
1

STAAR 2016

8.4B – 2 (R)

fourteen Z

- 3 An aquarium is being filled with water. The graph shows the height of the water over time as the aquarium is being filled.



Which statement best describes the rate of change for this situation?

- A The height of the water increases 20 inches per second.
- B The height of the water increases 1 inch per second.
- C The height of the water increases 5 inches per second.
- D The height of the water increases 2.5 inches per second.

2

STAAR 2018

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STAAR Items in A Box

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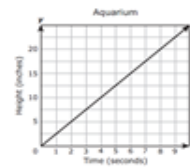
1

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STAAR Items in A Box

 **2018**


8.3C – 3 (R) **thirteen X**

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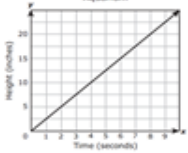
1

 **2016**

8.4B – 2 (R) **fourteen Z**

3 An aquarium is being filled with water. The graph shows the height of the water over time as the aquarium is being filled.

Aquarium



Which statement best describes the rate of change for this situation?

A The height of the water increases 20 inches per second.
B The height of the water increases 1 inch per second.
C The height of the water increases 5 inches per second.
D The height of the water increases 2.5 inches per second.

2

 **2018**

8.3C – 3 (R) **thirteen X**

29 A square with a perimeter of 20 units is graphed on a coordinate grid. The square is dilated by a scale factor of 0.4 with the origin as the center of dilation.

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B $(0.4x, 0.4y)$
C $(x + 20, y + 20)$
D $(x + 0.4, y + 0.4)$

3

Student Name _____

Class Period _____

STAAR REPORTING CATEGORY 2: COMPUTATIONS AND ALGEBRA									
Standard	TEKS	Student Expectation							
Supporting	6.3(A)	recognize that dividing by a rational number and multiplying by its reciprocal result in equivalent values.							
Supporting	6.3(B)	determine, with and without computation, whether a quantity is increased or decreased when multiplied by a fraction, including values greater than or less than one							
Supporting	6.3(C)	represent integer operations with concrete models and connect the actions with the models to standardized algorithms							
Readiness	6.3(D)	add, subtract, multiply, and divide integers fluently							
Readiness	6.3(E)	multiply and divide positive rational numbers fluently							
Supporting	6.4(A)	compare two rules verbally, numerically, graphically, and symbolically in the form of $y = ax$ or $y = x + a$ in order to differentiate between additive and multiplicative relationships							
Readiness	6.4(B)	apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates							
Supporting	6.5(A)	represent mathematical and real-world problems involving ratios and rates using scale							



Some things to think about

- Why do some students fail to perform on my assessments?
- Some of my students succeed on day to day lessons and activities but can't seem to remember or apply instructional strategies on a long term basis
- What kind of instructional adjustment can I make?
- What kind of assessment strategies or tools can I use?

(Adapted from Popham, 2008 Transformative Assessment)

Students failure to perform



Structuring Student Thinking

- What are some things I can do to help all students apply the strategies & skills sets that I've been teaching?
 - Providing supports (Hint Cards, Tips, Mnemonics)
 - Provide support cues & mini titles on initial assessments for instructional purposes
 - Use formative assessment to monitor student learning

A volume problem

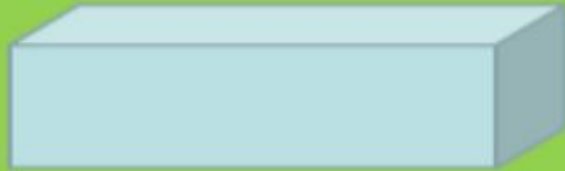
Martha is filling an aquarium with water. The aquarium has a rectangular base that measures 6 feet by $2\frac{1}{2}$ ft. If the height of the aquarium is $3\frac{1}{4}$ ft what is the volume of the aquarium when it is only half full?

- A) 45 cubic feet
- B) $22\frac{1}{2}$ cubic feet
- C) $15\frac{3}{4}$ cubic feet
- D) 10 cubic feet

Hint cards

Hint Card #1

Draw and label the following shape



Hint Card #3

Use the formula $V = B \times h$

Or

$$V = (l) (w) (h)$$

Hint Card #2

$$\frac{1}{2} = .50$$

$$\frac{3}{4} = .75$$

Hint Card #4

Change fractions to decimals to make the problem easier



Tips and mnemonics

Unit 1: Equivalent Forms of Fractions, Decimals, and Percents

Equivalent Fractions

$$\frac{3}{4} \begin{matrix} \times 2 \\ \times 2 \end{matrix} = \frac{6}{8}$$

F → D $\frac{3}{8} \leftarrow \div$ $8\sqrt{3.0}$	D → F $0.24 \rightarrow \frac{24}{100}$ Simplify
P → D $12\% \rightarrow 0.12$	D → P $0.175 \rightarrow 17.5\%$
P → F $26\% \rightarrow 0.26$ $\frac{26}{100} \xrightarrow{+2} \frac{13}{50}$	F → P $\frac{2}{5} \rightarrow 5\sqrt{2.0}$ $0.4 \rightarrow 40\%$

Percent of a Number

PART IS %

WHOLE OF 100

Percent is always out of 100!

Unit 2: Ordering Fractions, Decimals, and Integers

Classifying

Improper & Mixed Fractions

$2\frac{2}{5} = \frac{12}{5}$
 $\frac{13}{5} \rightarrow 5\sqrt{\frac{13}{10}}$
 $2\frac{3}{5}$

Ordering

Change everything to a decimal!
Line up your decimals.

Unit 3: Operations with Positive Fractions and Decimals

Decimals

$$\begin{array}{r} 13.2 \\ +9.0 \\ \hline 22.2 \end{array}$$

$$\begin{array}{r} 13.2 \\ -9.0 \\ \hline 4.2 \end{array}$$

Line 'em up!

$$\begin{array}{r} \div 0.3 \overline{)13.2} \\ \underline{9.0} \\ 4.2 \end{array}$$

$$\begin{array}{r} 13.2 \\ \times 3 \\ \hline 396 \end{array}$$

Move da decimal!

Fractions

$$\frac{3}{4} \div \frac{1}{2} = \frac{3}{4} \times \frac{2}{1} = \frac{6}{4} = 1\frac{2}{4} = 1\frac{1}{2}$$

Keep • Change • Flip

$$\frac{3}{4} \times \frac{1}{2} = \frac{3}{8}$$

When multiplying by a number:

- > | → gets Bigger
- < | → gets Smaller
- = | → stays Same

Tips and mnemonics

Unit 4: Operations with Integers

Absolute Value Always POSITIVE

$| -4 | = 4$
 $| 2 | = 2$

Opposites
 $3 = -3$
 $-5 = 5$

Zero Pairs

Adding & Subtracting
 Same Sign
 + SUM +

$-3 - 4 = -7$

Different Sign
 - DIFFERENCE -

$-3 + 4 = 1$

Multiply & Divide

Sleepy Man
 Only for \times or \div

$3 \times (-2) = -6$
 $(-4) \div (-2) = 2$

Unit 5: Proportional Reasoning with Ratios and Rates

Ratio
 Comparison between 2 things

people $\frac{4}{7}$
 cookies

Proportion
 miles $\frac{42}{3} = \frac{140}{x}$
 gallon

Don't forget your labels

Unit Rate
 $\frac{\$140}{24 \text{ pen}} = \frac{x}{1}$

Solving for 1 of something

Conversions
 quart $\frac{4}{1} = \frac{32}{x}$
 gallon

STAAR Chart

Unit 6: Equivalent Expressions and One-Variable Equations

Associative
 $(2+3)+4 = 2+(3+4)$
 $(2 \times 3) \times 4 = 2 \times (3 \times 4)$

Identity
 $2+0=2$
 $2 \times 1=2$

Properties
 Inverse: $(-3)+3=0$
 $3 \times \frac{1}{3}=1$

Commutative
 $2+3=3+2$
 $2 \times 3=3 \times 2$

Prime & Composite
 Only 2 factors: 2, 3, 5, 7, 11
 More than 2 factors: 4, 6, 8, 9, 10, 12, 14, 15, 16

Prime Factorization

P Parentheses: (), [], { }

E Exponents: $4^2=4 \times 4$
 $5^3=5 \times 5 \times 5$

M D Multiply and Divide
A S Add and Subtract
 FROM RIGHT TO LEFT

Expressions vs Equations
 $2+3$ $3x$ $5-x$ 9 $2+3=5$ $3x=6$ $5-x=3$
 EQUAL SIGN

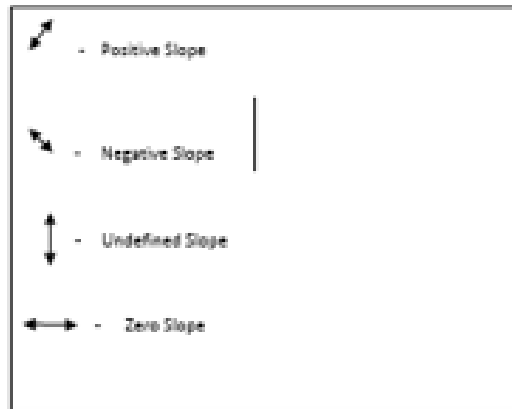
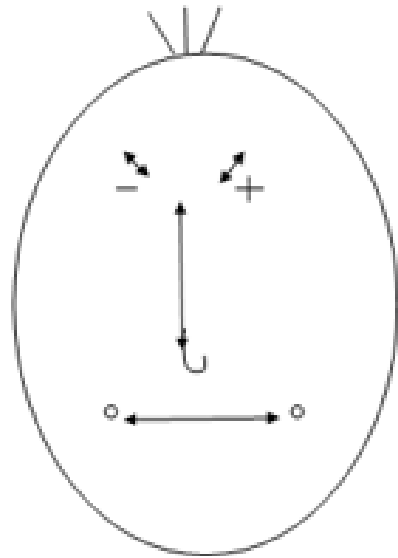
Simplify and Solve
 $3x + 5 - 2x + 4$
 Combine like terms!
 $3x - 2x + 5 + 4$
 $1x + 9 = x + 9$

If You See → You Do

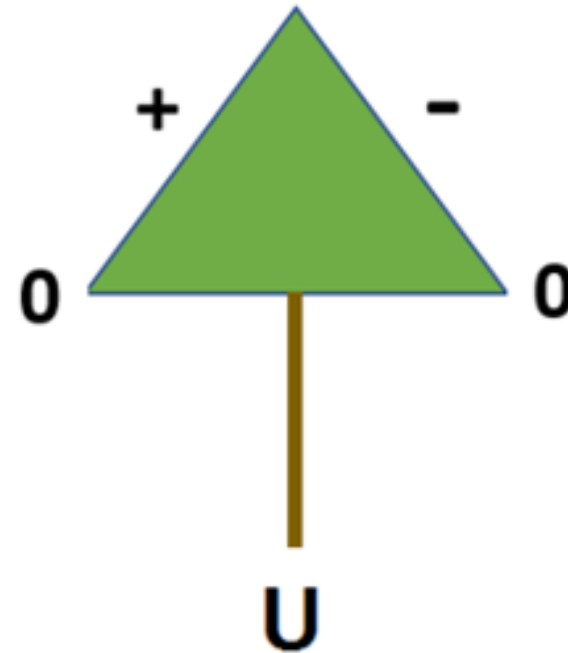
Addition	→	Subtraction	$x + 2 = 6$	-2	-2
Subtraction	→	Addition	$x = 4$	$+$	4
Multiplication	→	Division	$2 \cdot \frac{x}{2} = 10 \cdot 2$	\div	2
Division	→	Multiplication	$\frac{x}{2} = 20$	\times	20

Tips and mnemonics

Slope Man



Slope Tree



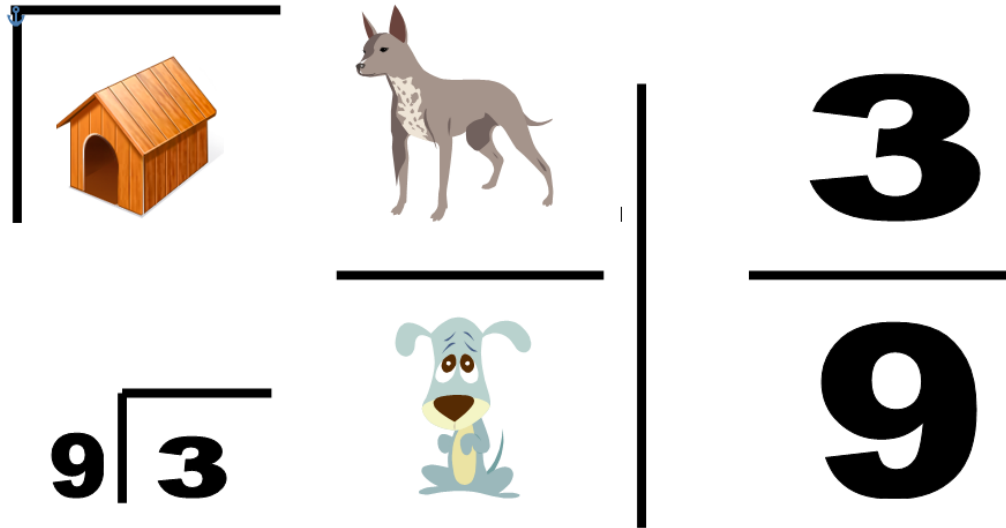
Tips and mnemonics

DR IDI OXY



Domain	Range
Independent	Dependent
Input	Output
X	Y

TIBO/ NIDO



Math Mnemonic: (TIBO – Top In Bottom Out) - used to help students remember which fractional part (number) goes inside the division symbol (house).

Can also use NIDO as mnemonic (Numerator In, Denominator Out)

“The Top Dog goes inside the house.”

Support cues on initial tests

#4 $2 \text{ in} = 1 \text{ ft}$

#2

Scientific Notation

- big numbers = + expon.
- small numbers = - expon.

$1.3 \times 10^4 = 1,3000$

$1.3 \times 10^{-4} = .0001, 3$

base = 10

Linear equation

$y = mx + b$

Slope Intercept

Direct Variation

Slope

$m = \frac{y_2 - y_1}{x_2 - x_1}$

Proportional

non-Proportional

Real Numbers

Rational	Irrational
... $-\frac{3}{4}, 5, \frac{9}{3}, 4, \frac{10}{20}, \sqrt{64}$	$\sqrt{2}$ $\sqrt[3]{3}$ π e
Integers	
... $-3, -2, -1, 0, 1, 2, 3, \dots$	
Whole Numbers	
$0, 1, 2, 3, 4, 5, 6, 7, \dots$	
Counting Numbers	
$1, 2, 3, 4, 5, 6, 7, \dots$	

#1

money = y word

time = x Prob.

Step 1: Distribute
 $3(a+b) = 3a + 3b$ (if needed!)

Step 2: Move all variables to the left of the "="
 (with Opposite sign!)

Step 3: Move all constant #'s to the right of the "="
 (with opposite sign!)

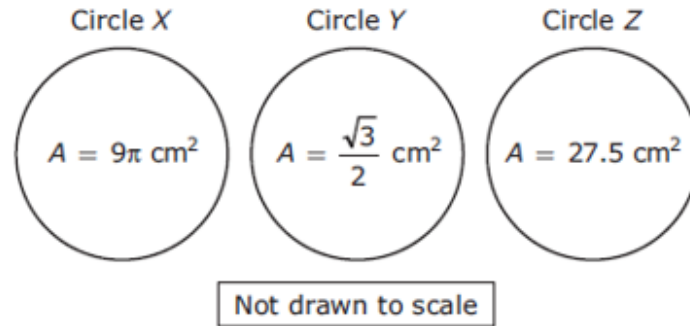
Step 4: Multiply or Divide both sides of "=" by the # with the variable.

Function \rightarrow X-values

Mini titles on assessments

Compare & order rational numbers

- 2 The areas of three circles are shown.



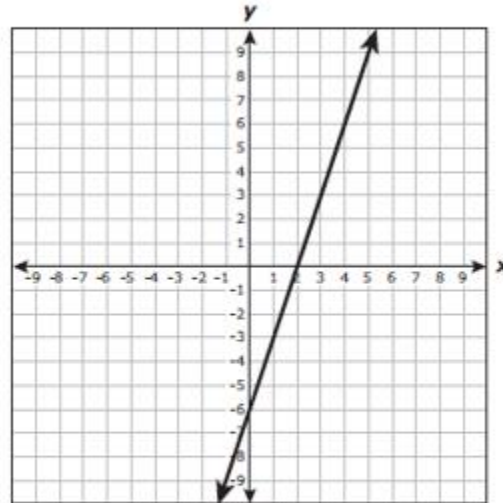
Which list shows the circles in order from greatest area to least area?

- A Circle Z, circle Y, circle X
- B Circle Y, circle Z, circle X
- C Circle X, circle Z, circle Y
- D Circle X, circle Y, circle Z

Mini titles on assessments

Calculator problem

- 7 Which equation can be used to describe the relationship between x and y shown in the graph below?



- A $y = 3x + 2$
- B $y = -3x - 6$
- C $y = 3x - 6$
- D $y = -3x + 2$

Mini titles on assessments

Pythagorean Theorem

Pythagorean Theorem: $a^2 + b^2 = c^2$

16 Which measurements could **not** represent the side lengths of a right triangle?

- A** 6 cm, 8 cm, 10 cm
- B** 12 cm, 35 cm, 37 cm
- C** 4 cm, 6 cm, 10 cm
- D** 10 cm, 24 cm, 26 cm

6.2(B) identify a number, its opposite, and its absolute value;
Supporting Standard

- Numbers
 - Positive numbers are to the right of zero on a horizontal number line and above zero on a vertical number line.
 - Represented with a (+) symbol or no symbol at all
 - Negative numbers are to the left of zero on a horizontal number line and below zero on a vertical number line.
 - Represented with a (-) symbol
 - Zero is neither positive nor negative.

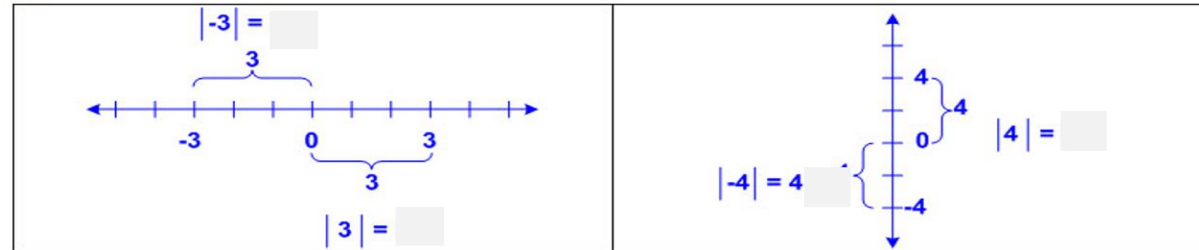
- Numbers

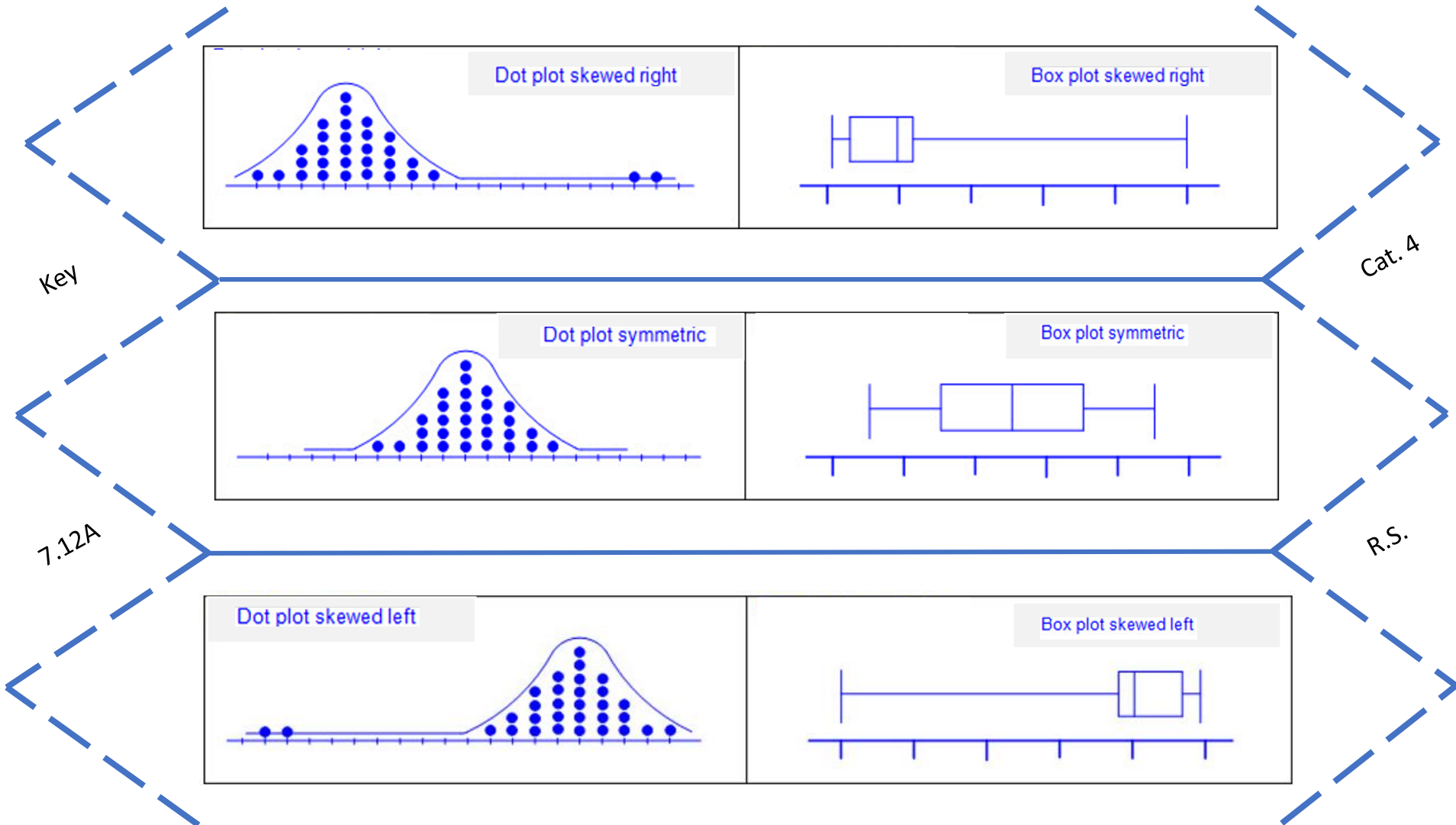
- are to the right of zero on a horizontal number line and above zero on a vertical number line.
 - Represented with a (+) symbol or no symbol at all
- are to the left of zero on a horizontal number line and below zero on a vertical number line.
 - Represented with a (-) symbol
- is neither positive nor negative.

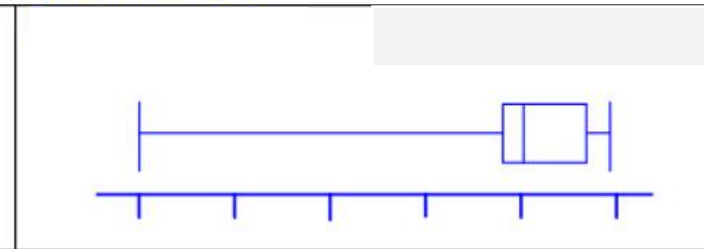
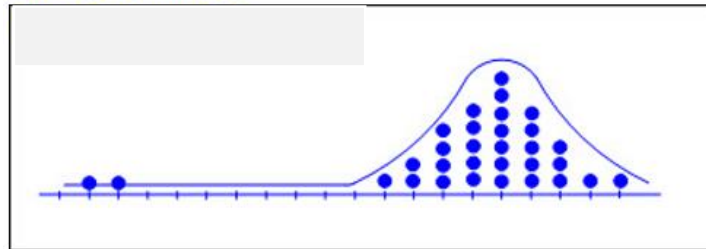
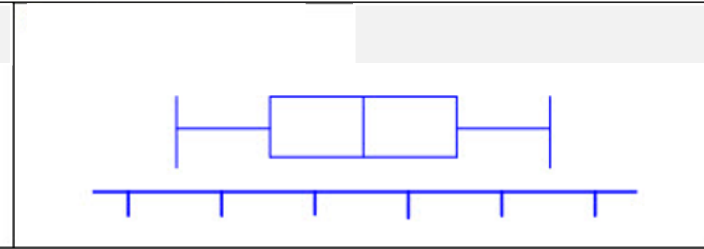
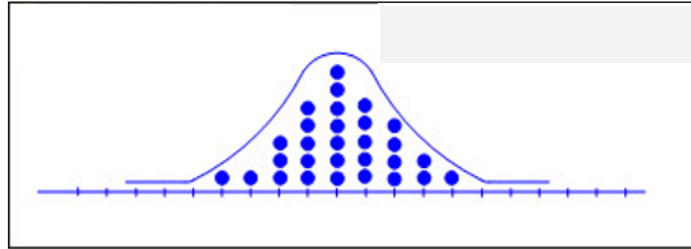
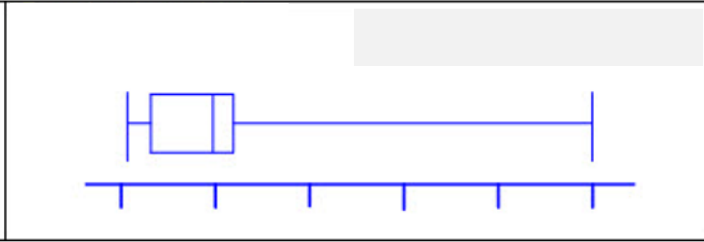
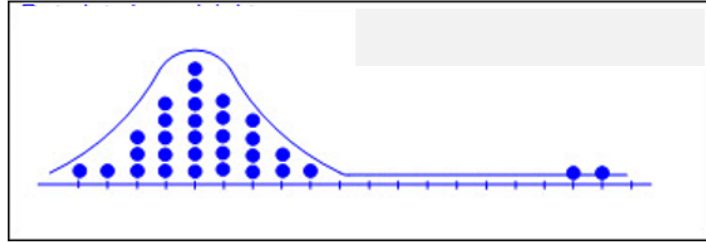
Relationships between a number and its absolute value

- – the distance of a value from zero on a number line
 - Notation for absolute value is $|x|$, where x is any number
 - Distance is always a positive value or zero.
- The distance of a number from zero is the same as the distance of its opposite from zero.

Ex:







1

Algorithm (the calculation)

Substitute the values

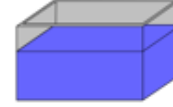
My solution

Choose a formula to use

Is the answer reasonable?

Draw & Label a Diagram

The Aquarium Problem



$$V = B \cdot h$$

B – area of the base

H - height

Martha is filling an aquarium with water. The aquarium has a rectangular base that measures $3\frac{1}{2}$ feet by 2.25 ft. If the height of the aquarium is 24 inches, what is the volume of the aquarium when it is only half full?

Multi Step Problem

Integer Rules

Samples

Add	Add	Subtract	Subtract
$+4 + +3$	$-4 + +3$	$+4 - -3$	$+4 - +3$
$+1$	-7	$+4 + +3$	$+4 + -3$
		$+7$	$+1$

Multiplying Integers

$$4 \cdot +3 \quad (-4) \cdot (-3)$$

$$-12 \quad +12$$

Dividing Integers

$$-9 \div -3 \quad -9 \div +3$$

$$+3 \quad -3$$

$()$	\div	
$\times \bullet$	$-$	
$\ast ()$	$\sqrt{\quad}$	$+$
Multiplication	Division	Addition
		Subtraction

Rules (Add)

- $+ +$ (add) $+$
- $- +$ (add) $-$
- $+ -$ (subtract) use sign of larger #
- $- +$ (subtract) use sign of larger #

Rules (Subtract)

- $+ -$ (Use sign of 2^{nd} ; use add rules)
- $- -$ (Use sign of 2^{nd} ; use add rules)
- $- -$ (Use sign of 2^{nd} ; use add rules)
- $- +$ (Use sign of 2^{nd} ; use add rules)

Rules (Multiply)

- $+ \bullet +$ (multiply) $+$
- $- \bullet +$ (multiply) $-$
- $+ \bullet -$ (multiply) $-$
- $- \bullet -$ (multiply) $+$

Rules (Division)

- $+ \div +$ (divide) $+$
- $- \div +$ (divide) $-$
- $+ \div -$ (divide) $-$
- $- \div -$ (divide) $+$

What do you know?

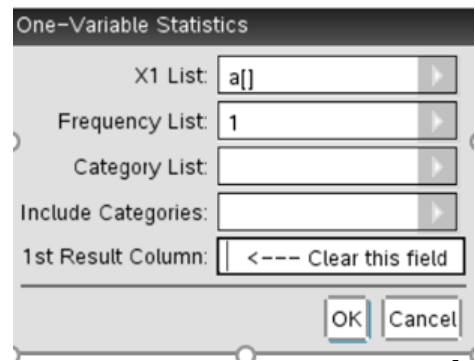
What do you need to know?

What else do you know?

Is your answer reasonable?



- 1) Open a new document
CTRL +
- 2) Open a new Spread Sheet
- 3) Enter the data (numbers) in the spread sheet (Column A)
- 4) Tab to the top (Cell A)
- 5) Press menu → Stats (4) →
Stats Calc. (1) → One Var. (1)

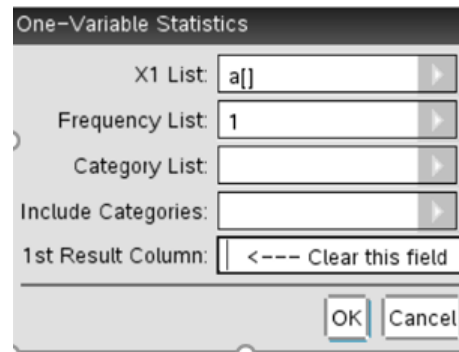


8) These are the results:

A	B	C	D
		=OneVar(
19	\bar{x}	20.	<---Mean
21	Σx	80.	
25	Σx^2	1652.	
	$s_x := s_n \dots$	4.16333	
	$\sigma_x := \sigma_n \dots$	3.60555	<---MSD



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Stats Calc. (1) → One Var.
(1)



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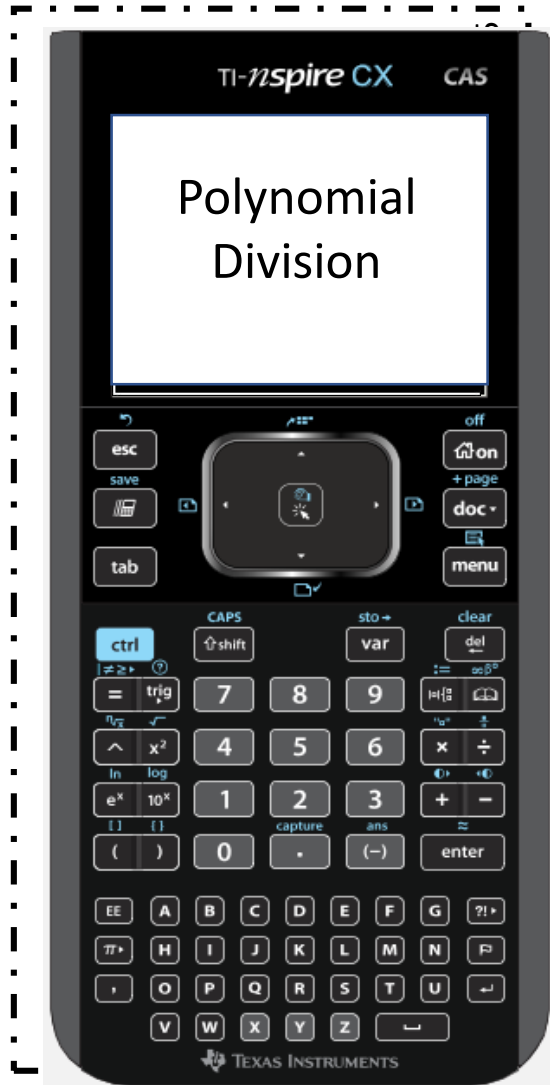
1

2



- 1) Open a new document
CTRL +
- 2) Open a new Spread Sheet
- 3) Go to the top Cell (A) and input X
- 4) Enter the data (numbers) in the spread sheet (Column A)
- 5) Scroll to the top & tab over to (Cell B)
- 6) In the first entry line (1) type the following formula $=\text{mean}(|x - \text{mean}(x)|)$ and press enter **(the solution will be in fraction form)**

- 7) Open a new calculator page and enter the fraction and add a decimal to a digit to display in decimal form

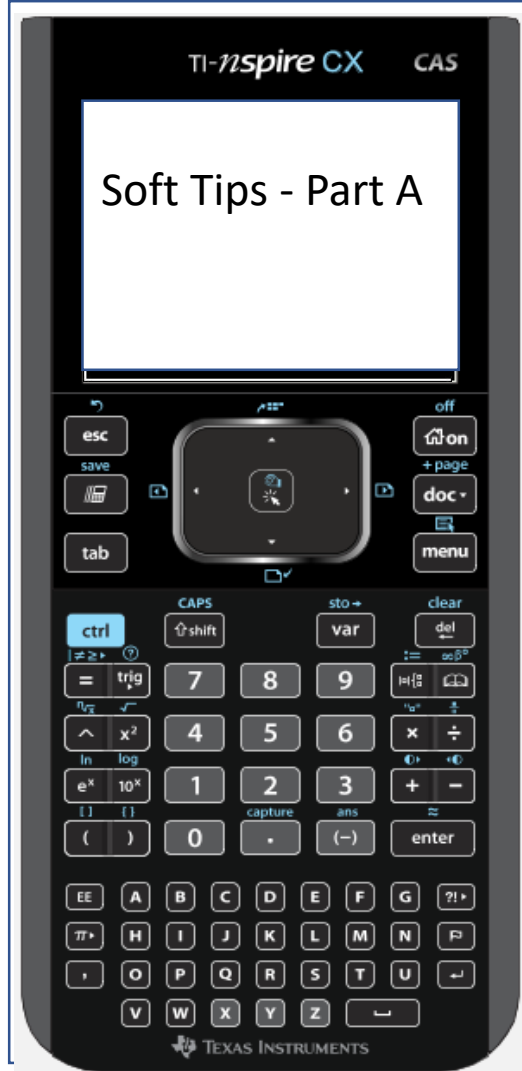


- 1) Press the Home Key
- 2) Click on New Document
- 3) Open a Graphs page
- 4) Press the back space key & select relations
- 5) Input the 1st equation (ie: $y = x^2 + 4x + 4$) & graph
- 6) Press tab to open a new graphs page
- 7) Input the 2nd equation $Y = x + 2$ (backspace relations)
- 8) The solution will be the monomial that actually intersects the original graph

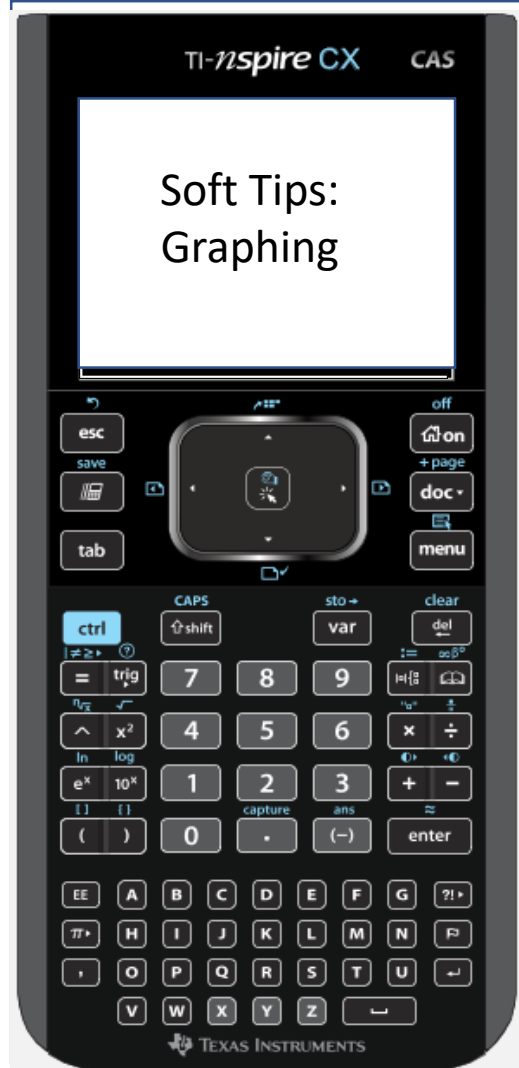


- 1) Press Home
- 2) Press new doc
- 3) New Calc
- 4) Press on the content tab
- 5) Press on the small calc icon under the content tab
- 6) Select "Enter press to Test" or Exit Press to Test





- 1) Press Home
- 2) Press New Doc
- 3) New Calc Page
- 4) Ctrl Z – Undo
- 5) Ctrl Y - Redo
- 6) Ctrl W – Del. Pgs
- 7) Ctrl C – Copy
- 8) Ctrl V – Paste
- 9) Ctrl Enter – Decimal Format



- 1) Press Home
- 2) Press New Doc
- 3) New Calc Page
- 4) Ctrl Z – Undo
- 5) Ctrl Y - Redo
- 6) Ctrl W – Del. Pgs
- 7) Ctrl C – Copy
- 8) Ctrl V – Paste
- 9) Ctrl Enter – Dec.
Format

