IXL Skills for Math Summer Work

Please complete linked skills for the respective grade that you are entering by achieving a score of 80 for each, along with the summer packet that is given out. Contact the office if you need access to your IXL account.

Grade 6

Decimal Rounding
Division
Decimal Division
Operations with Fractions and Mixed Numbers
Convert between Fractions Decimals and Percents

Grade 7

Fractions
Distributive Property
Like Terms
Rates
Proportions
Equations

Grade 8

Integers
Expressions
Two-Step Equations
Exponents
Percent Equations
Classify Numbers
Comparing Cost

Gr. 8

Name:_____ Homework Decimals and +, - , ×, ÷ fractions

Answer the following. Show your work.

(1) 8.94 + 26.9 + 5

(2) 26 - 7.43

(3) 5 - 0.5

(4) 6.2 × 0.37

(5) 0.009 × 0.003

(6) 8.96 ÷ 1.6

(7) 55.8 ÷ 0.18

(8) 3 ÷ 0.015

(9) $7\frac{3}{4}+2\frac{6}{7}$

(10) $5+\frac{2}{3}$

(11) $8\frac{7}{8}-2\frac{2}{5}$

(12) $6\frac{1}{2}-4\frac{5}{6}$

(13) $9-\frac{1}{12}$

(14) $\frac{21}{25}\times\frac{5}{12}$

(15) $7\frac{1}{2}\times3\frac{1}{3}$

(16) $4\frac{1}{2}\div2\frac{7}{10}$

(17) $6\div\frac{3}{4}$

(18) $3\frac{1}{3}\div\frac{4}{5}$

(19) $\frac{7}{10}\div1\frac{7}{8}$

(20) $8\frac{3}{4}\div3\frac{4}{7}$

Gr 8

Name:_____

multiplying and dividing real numbers

Find each product. Simplify if necessary.

(8) - 8(12) (9) 8(12) (10) 7(- 9) (11) $5 \cdot 4.1$

(12) $-7 \cdot 1.1$ (13) $10 \cdot (-2.5)$ (14) $6\left(-\frac{1}{4}\right)$ (15) $-\frac{1}{9}\left(-\frac{3}{4}\right)$

(16) $-\frac{3}{7} \cdot -\frac{9}{10}$ (17) $-\frac{2}{11}\left(-\frac{11}{2}\right)$ (18) $\left(-\frac{2}{9}\right)^2$ (19) $(-1.2)^2$

Find each quotient. Simplify if necessary.

(30) $48 \div 3$ (31) $-84 \div 14$ (32) $-39 \div (-13)$ (33) $\frac{63}{-21}$

(34) $-46 \div 2$ (35) $-81 \div 9$ (36) $\frac{-121}{11}$ (37) $75 \div (-0.3)$

(40) $20 \div \frac{1}{4}$ (41) $-5 \div -\frac{5}{3}$ (42) $\frac{9}{10} \div \left(-\frac{4}{5}\right)$ (43) $-\frac{12}{13} \div \frac{12}{13}$

Gr. 8

worksheet Solving two step equations

Solve the following equations. Show steps. NOT JUST ANSWERS.

(1) $6 + 3b = -18$

(2) $-3 + 5x = 12$

(3) $7n + 12 = -23$

(4) $\frac{t}{6} - 3 = 8$

(5) $-12 = 8 + \frac{f}{2}$

(6) $13 = 8 - 5d$

(7) $\frac{k}{4} + 6 = -2$

(8) $-22 = -8 + 7y$

(9) $16 - 3p = 34$

(10) $15 + \frac{a}{6} = -21$

(11) $-19 + \frac{c}{3} = 8$

(12) $-18 - 11r = 26$

(13) $-9 = \frac{y}{-3} - 6$

(14) $\frac{w - 7}{2} = -11$

(15) $\frac{1}{4} = \frac{1}{4}h + 4$

(16) $6.42 - 10d = 2.5$

Name: _____ Chapter 2 review (2) Grade 8

Evaluate each expression for p = 5.5 and w = - 2

(1) p + 4w

(2) 7 w - 2p

Simplify each expression. (combine like terms)

(3) - 6.6x + 11 + 1.3 + 2x

(4) $5n+3(n+4)-1$

(5) 2 (r + 5) - 2

Use inverse operations to solve each equation. Show your steps.

(6) x - 8 = 44

(8) $\frac{n}{6}=-9$

(7) k - 14 = 29

(9) 12h = 60

Solve each equation. Show your steps.

(10) 2m - 21 = 3

(12) 8r + 6 = - 34

(14) $9x-8=-44$

(11) - 5y + 8 = 23

(13) 5t + 0.5 = - 4.75

(15) 3p + 19 = - 14

* Solving Strategy Review Sheets *

Adding and Subtracting Decimals.

When adding decimals, line up the decimal points first.

Then add 0's to make the same amount of columns.

(ex) Find the sum of 2.37 + 145.8 + 9.4

Line up points:
$$\begin{array}{r} 2.37 \\ 145.8 \\ +\ 9.4 \\ \hline \end{array}$$

add zeros:
$$\begin{array}{r} 002.37 \\ 145.80 \\ +\ 009.40 \\ \hline \end{array}$$

add columns:
$$\begin{array}{r} 002.37 \\ 145.80 \\ 009.40 \\ \hline 157.57 \end{array}$$

When there is no point on the number, it is at the end of the number.

(ex) Find the sum of 8.64 + 37.2 + 4. the point is at the end of the 4

Line up points:
$$\begin{array}{r} 8.64 \\ 37.2 \\ +\ 4. \\ \hline \end{array}$$

add zeros:
$$\begin{array}{r} 08.64 \\ 37.20 \\ +\ 04.00 \\ \hline \end{array}$$

add columns:
$$\begin{array}{r} 08.64 \\ 37.20 \\ 04.00 \\ \hline 49.84 \end{array}$$

(ex) Find the difference of 212.3 - 8.75

Line up points:
$$\begin{array}{r} 212.3 \\ -\ 8.75 \\ \hline \end{array}$$

add zeros:
$$\begin{array}{r} 212.30 \\ -\ 008.75 \\ \hline \end{array}$$

subtract columns:
$$\begin{array}{r} {}^{0}{}^{11}{}^{12}{}^{10} \\ 2\not{1}\not{2}.\not{3}0 \\ -\ 008.75 \\ \hline 203.55 \end{array}$$

When there is no point on the number, it is at the end of the number.

(ex) Find the difference of 6. - 0.718

Line up points:
$$\begin{array}{r} 6. \\ -\ 0.718 \\ \hline \end{array}$$

add zeros:
$$\begin{array}{r} {}^{5}{}^{9}{}^{9} \\ 6.\not{0}\not{0}\not{0}^{10} \\ -\ 0.718 \\ \hline 5.282 \end{array}$$

Dividing decimals.

The first number ALWAYS goes "in" the division box.

If there is no decimal point in the "outside" number, do not move the point "inside" the box.

If there is a decimal point in the "outside" number, move the point to the end of the number and move the point the same amount of places for the "inside" number.

(ex) Divide 18.4 by 8

$8\overline{)18.4}$ $8\overline{)18.4}$ $8\overline{)18.4}$ 2.4, -16, 24, -24, 0

(ex) Divide 9.72 by 2.7

$2.7\overline{)9.72}$ $2.7\overline{)9.72}$ $27\overline{)97.2}$ 3.6, -81, 162, -162, 0

(ex) Divide 46.8 by 0.18

$0.18\overline{)46.8}$ $0.18\overline{)46.80}$ $18\overline{)4680}$ 260, -36, 108, -108, 0

(ex) Divide 273 by 0.7

$0.7\overline{)273}$ $0.7\overline{)273.0}$ $7\overline{)2730}$ 390, -21, 63, -63, 0

Divide 2 by 0.25

$0.25\overline{)2}$ $0.25\overline{)2.00}$ $25\overline{)200}$ 8, -200, 0

Sometimes you need to borrow in subtraction.

(ex) $6\frac{1}{4} - 2\frac{3}{5}$ LCM is 20

$5\ \cancel{6}\ \frac{1}{4}\cdot 5 = \frac{5}{20}$ added. Can't subtract.

$-\ 2\ \frac{3}{5}\cdot 4 = \frac{12}{20}$ Borrow 1 from the 6 add the 20 and 5

$3\ \frac{13}{20}$

(ex) $9 - 6\frac{3}{8}$

$8\ 9\frac{8}{8}$ Borrow from the 9 Make the $1, \frac{8}{8}$

$-\ 6\ \frac{3}{8}$

$2\ \frac{5}{8}$

Multiplication of fractions.

Change the mixed numbers to improper fractions.

Then do any "cross reducing" of the fractions.

(ex) $2\frac{6}{7} \times 2\frac{4}{5}$

$\overset{4}{\cancel{20}}{}^{1} \times \overset{2}{\cancel{14}}{}^{1} = \frac{8}{1} = 8$

(ex) $2\frac{1}{10} \times 1\frac{1}{14}$

$\overset{3}{\cancel{21}}{}^{1} \times \overset{3}{\cancel{15}}{}^{1} = \frac{9}{4} = 2\frac{1}{4}$

$4\overline{)9}$ R 1 $\quad 2\frac{1}{4}$

(ex) $8 \times 1\frac{1}{2}$

$\overset{4}{8} \times \frac{3}{\cancel{2}_{1}} = \frac{12}{1} = 12$

(ex) $\frac{15}{16} \times 1\frac{13}{15}$

$\overset{1}{\cancel{15}}{}^{4} \times \overset{1}{\cancel{28}}{}^{1} = \frac{7}{4} = 1\frac{3}{4}$

$4\overline{)7}$ R 3 $\quad 1\frac{3}{4}$