

NAME: KEY DATE: _____

TEST ON UNITS 1.1 AND 1.2 OF ALGEBRA I
(SIMPLIFY EACH OF THE FOLLOWING)

1. To add or subtract, the names have to be the same.

In Algebra we call them like terms.

When you add or subtract, the name stays the same.

2. $9M + 7M = \underline{16M}$ 3. $5XB - 3XB = \underline{2XB}$

4. $\frac{3}{11} + \frac{7}{11} = \underline{\frac{10}{11}}$ 5. $\frac{5}{7} - \frac{3}{7} = \underline{\frac{2}{7}}$

6. $9\sqrt{5} + 6\sqrt{5} = \underline{15\sqrt{5}}$ 7. $5\sqrt{11} - 3\sqrt{11} = \underline{2\sqrt{11}}$

8. $9\sqrt{5} + \frac{7}{11} + 7M + 6\sqrt{5} + 9M + \frac{3}{11} = \underline{15\sqrt{5} + \frac{10}{11} + 16M}$

9. When you multiply, you multiply the numbers
and you multiply the names and you get a new
name. When you multiply with like bases you add
the exponents.

10. $5X^5 \times 8X^3 = \underline{40X^8}$

11. $0.2 \times 0.3 = \underline{.06}$

$$\begin{array}{r} .2 \\ \times .3 \\ \hline .06 \end{array}$$

$$12. \frac{3}{7} \times \frac{5}{11} = \frac{15}{77}$$

$$13. 1.2 \times 2.3 = \underline{2.76}$$

$$\begin{array}{r} 1.2 \\ \times 2.3 \\ \hline 36 \\ 240 \\ \hline 2.76 \end{array}$$

$$14. 7\sqrt{5} \times 2\sqrt{3} = \underline{14\sqrt{15}}$$

$$15. (0.4)^2 = \underline{.16}$$

$$\begin{array}{r} .4 \\ \times .4 \\ \hline .16 \end{array}$$

$$16. 4X^3Y^7Z^2 \times 3X^2Y^4Z^5 = \underline{12X^5Y^{11}Z^7}$$

17. When you divide with like bases you subtract the exponents. Remember that a fraction bar represents division.

$$18. X^7 \div X^3 = \underline{X^4}$$

$$19. \frac{M^5}{M^3} = \underline{M^2}$$

$$20. \frac{4X^7Y^3}{8X^2Y^5} = \underline{\frac{X^5}{2Y^2}}$$

NAME: KEY DATE: _____

RE-TEST ON UNITS 1.1 AND 1.2 OF ALGEBRA I
(SIMPLIFY EACH OF THE FOLLOWING)

1. To add or subtract, the names have to be the same.

In Algebra we call them like terms.

When you add or subtract, the name stays the same.

2. $11M + 8M = \underline{19M}$

3. $15XB - 5XB = \underline{10XB}$

4. $\frac{4}{13} + \frac{7}{13} = \underline{\frac{11}{13}}$

5. $\frac{6}{7} - \frac{3}{7} = \underline{\frac{3}{7}}$

6. $9\sqrt{5} + 7\sqrt{5} = \underline{16\sqrt{5}}$

7. $9\sqrt{11} - 3\sqrt{11} = \underline{6\sqrt{11}}$

8. $3\sqrt{5} + \frac{8}{11} + 3M + 2\sqrt{5} + 8M + \frac{1}{11} = \underline{5\sqrt{5} + \frac{9}{11} + 11M}$

9. When you multiply, you multiply the numbers

and you multiply the names and you get a new

name. When you multiply with like bases you add

the exponents.

10. $7X^7 \times 3X^4 = \underline{21X^{11}}$

11. $0.3 \times 0.3 = \underline{.09}$

$$\begin{array}{r} .3 \\ \times .3 \\ \hline .09 \end{array}$$

$$12. \frac{3}{5} \times \frac{4}{11} = \frac{12}{55}$$

$$13. 1.3 \times 2.4 = \underline{3.12}$$

$$\begin{array}{r} 1 \\ 2.4 \\ \times 1.3 \\ \hline .72 \\ 240 \\ \hline 3.12 \end{array}$$

$$14. 7\sqrt{11} \times 4\sqrt{3} = \underline{28\sqrt{33}}$$

$$15. (0.8)^2 = \underline{.64}$$

$$\begin{array}{r} .8 \\ \times .8 \\ \hline .64 \end{array}$$

$$16. 5X^4Y^9Z^3 \times 7X^3Y^4Z^6 = \underline{35X^7Y^{13}Z^9}$$

17. When you divide with like bases you subtract the exponents. Remember that a fraction bar represents division.

$$18. X^{10} \div X^4 = \underline{X^6}$$

$$19. \frac{M^7}{M^2} = \underline{M^5}$$

$$20. \frac{4X^7Y^6}{12X^3Y^{11}} = \underline{\frac{X^4}{3Y^5}}$$

NAME: KEY DATE: _____

TEST ON UNITS 1.1, 1.2, AND 1.5 OF ALGEBRA I
(SIMPLIFY EACH OF THE FOLLOWING)

1. To add or subtract, the names have to be the same.

In Algebra we call them like terms.

When you add or subtract, the name stays the same.

2. $9M + 2M = \underline{11M}$ 3. $8\sqrt{15} - 6\sqrt{15} = \underline{2\sqrt{15}}$

4. When you multiply, you multiply the numbers
and you multiply the names and you get a new
name. When you multiply with like bases you add
the exponents.

5. $5X^3Y^7Z^2 \times 6X^5Y^4Z^3 = \underline{30X^8Y^{11}Z^5}$

6. $7\sqrt{11} \times 5\sqrt{3} = \underline{35\sqrt{33}}$

7. When you divide with like bases you subtract the
exponents. Remember that a fraction bar represents
division.

8. $X^{13} \div X^6 = \underline{X^7}$ 9. $\frac{8X^9Y^7}{12X^3Y^{11}} = \underline{\frac{2X^6}{3Y^4}}$

10. Any number raised to the First Power equals that number. ^{itself} _{or}

11. $8^1 = \underline{8}$ 12. $G^1 = \underline{G}$

13. Any number raised to the Zero Power is 1.

14. $9^0 = \underline{1}$ 15. $F^0 = \underline{1}$

16. The One Half Power means square root or $\sqrt{\quad}$.

17. $9^{\frac{1}{2}} = \underline{\sqrt{9}} = \underline{3}$ 18. $X^{\frac{1}{2}} = \underline{\sqrt{X}}$

19. An exponent of Two means the number times itself.

20. $6^2 = \underline{6} \times \underline{6} = \underline{36}$

NAME: KEY DATE: _____

RE-TEST ON UNITS 1.1, 1.2, AND 1.5 OF ALGEBRA I
(SIMPLIFY EACH OF THE FOLLOWING)

1. To add or subtract, the names have to be the same.

In Algebra we call them like terms.

When you add or subtract, the name stays the same.

2. $9M + 5M = \underline{14M}$ 3. $14\sqrt{15} - 6\sqrt{15} = \underline{8\sqrt{15}}$

4. When you multiply, you multiply the numbers
and you multiply the names and you get a new
name. When you multiply with like bases you add
the exponents.

5. $5X^3Y^7Z^2 \times 11X^7Y^5Z^4 = \underline{55X^{10}Y^{12}Z^6}$

6. $9\sqrt{11} \times 6\sqrt{5} = \underline{54\sqrt{55}}$

7. When you divide with like bases you subtract the
exponents. Remember that a fraction bar represents
division.

8. $X^{15} \div X^4 = \underline{X^{11}}$ 9. $\frac{18X^8Y^9}{12X^5Y^{15}} = \underline{\frac{3X^3}{2Y^6}}$

10. Any number raised to the First Power equals that number. *itself or*

11. $12^1 = \underline{12}$ 12. $H^1 = \underline{H}$

13. Any number raised to the Zero Power is 1.

14. $13^0 = \underline{1}$ 15. $B^0 = \underline{1}$

16. The One Half Power means square root $\sqrt{\quad}$.

17. $16^{\frac{1}{2}} = \underline{\sqrt{16}} = \underline{4}$ 18. $Z^{\frac{1}{2}} = \underline{\sqrt{Z}}$

19. An exponent of Two means the number times itself.

20. $8^2 = \underline{8} \times \underline{8} = \underline{64}$

NAME: KEY DATE: _____

TEST ON UNITS 1.1, 1.2, 1.3, 1.4, and 1.5 OF ALGEBRA I
FRACTIONS, DECIMALS AND UNITS OF MEASURE
(SIMPLIFY EACH OF THE FOLLOWING).

1. To add or subtract the names have to be the same.

In Algebra we call them like terms.

For fractions we say that we need a common denominator. When you add or subtract, the name stays the same.

2. To carry or borrow you ask the question, how many of these does it take to make one of those.

$$\begin{array}{r} 3. \quad \frac{7 \times 4 = 28}{9 \times 4 = 36} \\ + \frac{3 \times 9 = 27}{4 \times 9 = 36} \\ \hline \end{array}$$

$$\left(\frac{55}{36} \right) = \left(1 \frac{19}{36} \right)$$

$$\begin{array}{r} 4. \quad \frac{8 \times 2 = 16}{9 \times 2 = 18} \\ - \frac{5 \times 3 = 15}{6 \times 3 = 18} \\ \hline \end{array}$$

$$\left(\frac{1}{18} \right)$$

$$\begin{array}{r} 5. \quad \overset{1}{8} \frac{11}{13} \\ + 5 \frac{9}{13} = \\ \hline \end{array}$$

$$\frac{20}{13} - \frac{13}{13} = \frac{7}{13}$$

$$\left(14 \frac{7}{13} \right)$$

$$\overset{1}{13} \frac{20}{13} - \frac{13}{13} = \frac{7}{13}$$

$$\begin{array}{r} 6. \quad \overset{10}{11} \frac{5}{17} + \frac{17}{17} = \frac{22}{17} \\ - 2 \frac{13}{17} = \\ \hline \end{array}$$

$$\left(8 \frac{9}{17} \right)$$

1 yard = 3 feet 1 foot = 12 inches

$$\begin{array}{r} \text{1 yard} \quad \text{1 foot} \\ 7 \text{ yards } 2 \text{ feet } 8 \text{ inches} \\ + 3 \text{ yards } 2 \text{ feet } 9 \text{ inches} \\ \hline 5 \text{ feet } 17 \text{ inches} \\ - 3 \text{ feet } - 12 \text{ inches} \\ \hline 11 \text{ yards } 2 \text{ feet } 5 \text{ inches} \end{array}$$

$$\begin{array}{r} 4 \text{ feet} \\ + 3 \text{ feet } 14 \text{ inches} \\ 8 \text{ yards } 1 \text{ foot } 12 \text{ inches} \\ 9 \text{ yards } 2 \text{ feet } 2 \text{ inches} \\ - 3 \text{ yards } 2 \text{ feet } 7 \text{ inches} \\ \hline 5 \text{ yards } 2 \text{ feet } 7 \text{ inches} \end{array}$$

9. When you multiply, you multiply the numbers and you multiply the names and you get a new name.

10. To multiply decimals you count up the number of decimal places in the factors and put that many decimal places in the product.

11. To divide by a fraction you reciprocate it and then multiply.

12. To divide by a decimal move it over enough places in the divisor so that it becomes a whole number then move it the same number of spaces in the dividend.

$$13. \frac{5}{13} \times \frac{3}{7} = \frac{15}{91}$$

$$14. \frac{5}{8} \div \frac{7}{9} = \frac{5}{8} \cdot \frac{9}{7} = \frac{45}{56}$$

$$15. \frac{5\frac{+3}{5}}{\times 5} \times \frac{3\frac{+2}{7}}{\times 7} = \frac{5\sqrt[5]{92}}{\frac{42}{-40}} = 18\frac{2}{5}$$

$$16. \frac{9\frac{+2}{3}}{\times 3} \div \frac{6\frac{+4}{9}}{\times 9} = \frac{2\sqrt[2]{3}}{\frac{-2}{1}} = \frac{29}{3} \div \frac{58}{9} = \frac{129}{3} \cdot \frac{9}{58} = \frac{9}{6} = \frac{3}{2} = 1\frac{1}{2}$$

$$17. \begin{array}{r} 4.35 \\ \times 2.41 \\ \hline 435 \\ 17400 \\ 87000 \\ \hline 10.4835 \end{array}$$

$$18. (0.013)^2 = \begin{array}{r} .013 \\ \times .013 \\ \hline 39 \\ 130 \\ \hline .000169 \end{array}$$

$$19. \begin{array}{r} 3.04 \\ 1.2 \overline{) 3.648} \\ \underline{-36} \\ 048 \\ \underline{-48} \\ 0 \end{array}$$

20. Write the metric prefix below the value given.

1000	100	10	1	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
<u>Kilo</u>	<u>Hecto</u>	<u>Deka</u>	<u>basic</u>	<u>deci</u>	<u>centi</u>	<u>milli</u>