Curriculum Outcome

(N5) Determine the square root of positive rational numbers that are perfect squares.

(N6) Determine an approximate square root of positive rational numbers that are non-perfect squares.

(SS2) Determine the surface area of composite 3-D objects to solve problems

(N4) **Explain and apply the order of operations, including exponents, with and without technology.**

Please Complete
Questions
Pages
18 and 19.

4) a,c,e without
5) a,c,e without

ENJOY!

7) a, c, e without
9)a, c
10) a, c,e
11) a,b
12)a c
13) ac
15 (Estimate first then answer the question *Show work*)
19 a c

Name : _____ Score : _____

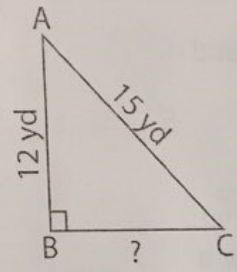
est

Pythagorean Theorem

Sheet 1

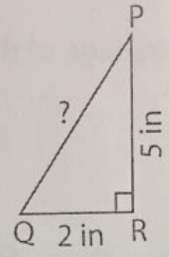
Determine the missing length in each right triangle using the Pythagorean theorem. Round the answer to the nearest tenth.

1)



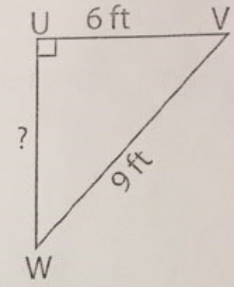
BC = _____

2)



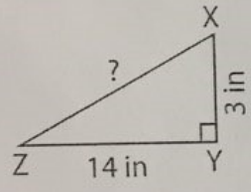
PQ = _____

3)



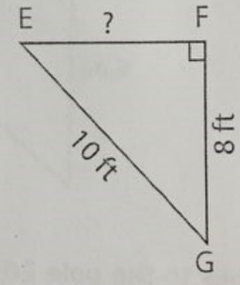
UW = _____

4)



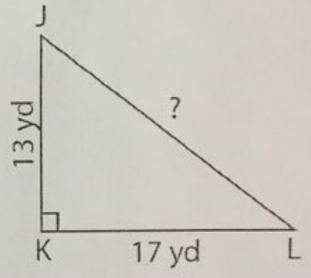
XZ = _____

5)



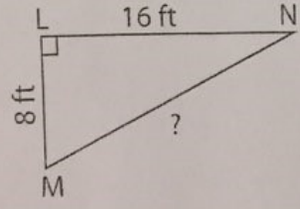
EF = _____

6)



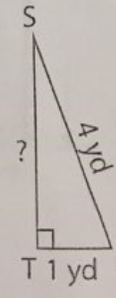
JL = _____

7)



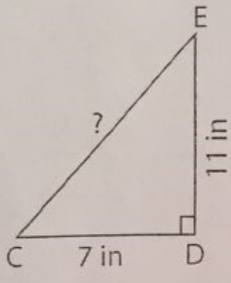
MN = _____

8)



ST = _____

9)



CE = _____

Lesson 2: Pythagorean Theorem

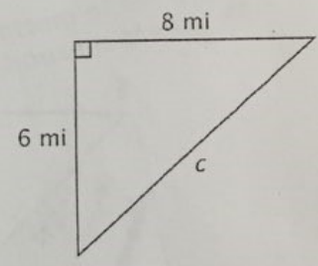
Teacher Blackline #1

1) If one leg of a right triangle is 12 and the other leg is 16, what is the length of the hypotenuse in this right triangle?

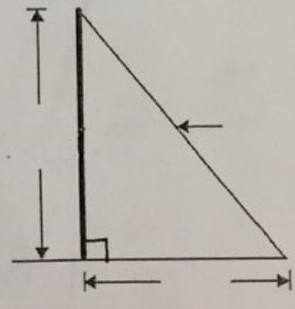
2) Find the missing measure if a and b are the legs of the right triangle and c is the hypotenuse, with $a = 11$ and $c = 61$.

3) The measures of three sides of a triangle are given. Determine whether a triangle with sides 9, 40 and 41 is a right triangle. Explain your answer.

4) Find the missing side of the triangle.



5) A telephone pole support cable attaches to the pole 20 feet high. If the cable is 25 feet long, how far from the bottom of the pole does the cable attach to the ground?



Lesson 2: Pythagorean Theorem — Student Worksheet #2

1) Find the length of the hypotenuse of a right triangle, if one leg is 15 and the other leg is 8.

2) The legs of a right triangle have lengths a and b. The hypotenuse has length c. Find the unknown length for each triangle.
(a) $b = 18,\ c = 82$ (b) $a = 12,\ c = 37$

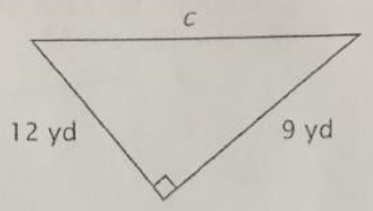
3) The measures of three sides of a triangle are 9, 16, and 20. Determine whether the triangle is a right triangle. Explain your answer.

4) The size of a television screen is given by the length of the diagonal of the screen. What size is a television screen that is 21.6 inches wide and 16.2 inches high?

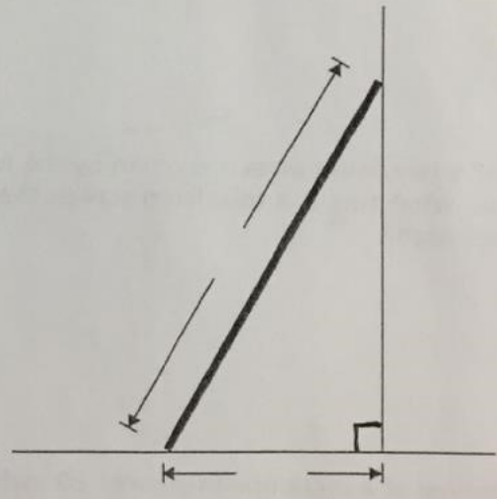
5) If the diagonal of a rectangle measures 60 inches and one side measures 48 inches, what is the length of the other side of the rectangle?

6) A disabled ship radios to shore for help. The Coast Guard determines that the ship is 16 miles east and 43 miles north of the station. What is the direct distance between the ship and the Coast Guard station? Round answer to the nearest whole number.

7) Find the missing side of the triangle.



8) Tara leaned a 17 foot ladder against the house. The bottom of the ladder is 8 feet from the house. How high up the side of the house is the top of the ladder?



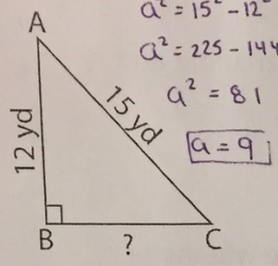
ne : _____ Score : _____

Pythagorean Theorem

Sheet 1

etermine the missing length in each right triangle using the Pythagorean theorem. Round ne answer to the nearest tenth.

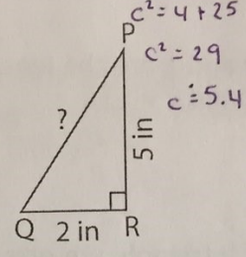
1)



$a^2 = c^2 - b^2$
$a^2 = 15^2 - 12^2$
$a^2 = 225 - 144$
$a^2 = 81$
$a = 9$

BC = 9 yd

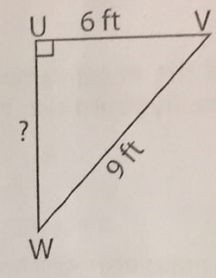
2)



$c^2 = a^2 + b^2$
$c^2 = 2^2 + 5^2$
$c^2 = 4 + 25$
$c^2 = 29$
$c = 5.4$

PQ = 5.4 in

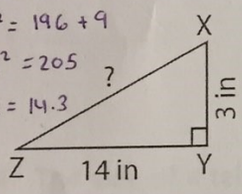
3)



$a^2 = c^2 - b^2$
$a^2 = 9^2 - 6^2$
$a^2 = 81 - 36$
$a^2 = 45$
$a = 6.7$

UW = 6.7 ft

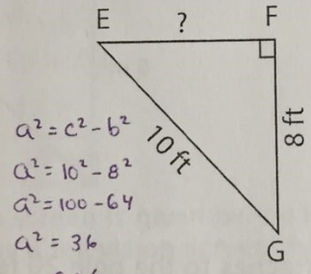
4)



$c^2 = a^2 + b^2$
$c^2 = 14^2 + 3^2$
$c^2 = 196 + 9$
$c^2 = 205$
$c = 14.3$

XZ = 14.3 in

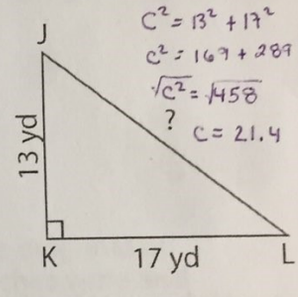
5)



$a^2 = c^2 - b^2$
$a^2 = 10^2 - 8^2$
$a^2 = 100 - 64$
$a^2 = 36$
$a = 6$

EF = 6 ft

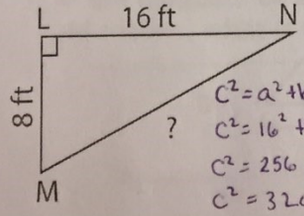
6)



$c^2 = a^2 + b^2$
$c^2 = 13^2 + 17^2$
$c^2 = 169 + 289$
$\sqrt{c^2} = \sqrt{458}$
$c = 21.4$

JL = 21.4 yd

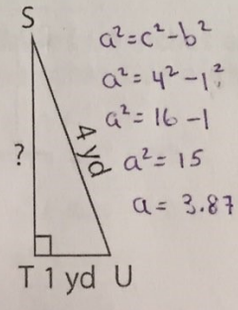
7)



$c^2 = a^2 + b^2$
$c^2 = 16^2 + 8^2$
$c^2 = 256 + 64$
$c^2 = 320$
$c = 17.9$

MN = 17.9 ft

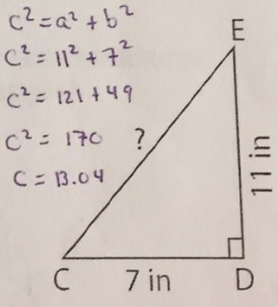
8)



$a^2 = c^2 - b^2$
$a^2 = 4^2 - 1^2$
$a^2 = 16 - 1$
$a^2 = 15$
$a = 3.87$

ST = 3.9 yd

9)



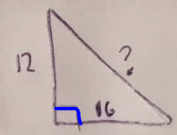
$c^2 = a^2 + b^2$
$c^2 = 11^2 + 7^2$
$c^2 = 121 + 49$
$c^2 = 170$
$c = 13.04$

CE = 13 in

rintable Math Worksheets @ www.mathworksheets4kids.com

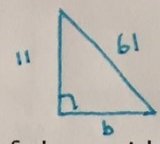
Lesson 2: Pythagorean Theo...

1) If one leg of a right triangle is 12 and the other leg is 16, what is the length of the hypotenuse in this right triangle?



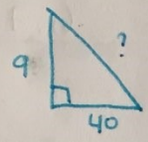
$c^2 = a^2 + b^2$
$c^2 = 16^2 + 12^2$
$c^2 = 256 + 144$
$c^2 = 400$
$c = 20$

2) Find the missing measure if a and b are the legs of the right triangle and c is the hypotenuse, with $a = 11$ and $c = 61$.



$b^2 = c^2 - a^2$
$b^2 = 61^2 - 11^2$
$b^2 = 3721 - 121$
$b^2 = 3600$
$b = 60$

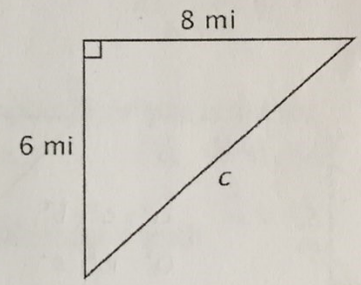
3) The measures of three sides of a triangle are given. Determine whether a triangle with sides 9, 40 and 41 is a right triangle. Explain your answer.



$c^2 = a^2 + b^2$
$c^2 = 9^2 + 40^2$
$c^2 = 81 + 1600$
$c^2 = 1681$
$c = 41$

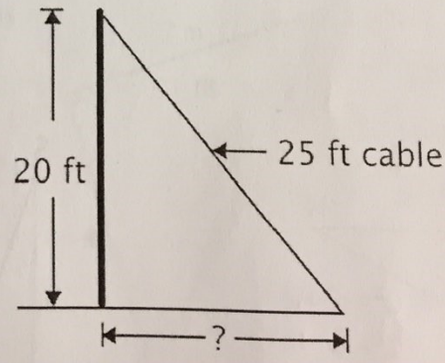
yes it is a right angle triangle

4) Find the missing side of the triangle.



$c^2 = a^2 + b^2$
$c^2 = 8^2 + 6^2$
$c^2 = 64 + 36$
$c^2 = 100$
$c = 10$ mi

A telephone pole support cable attaches to the pole 20 feet high. If the cable is 25 feet long, how far from the bottom of the pole does the cable attach to the ground?



$b^2 = c^2 - a^2$
$b^2 = 25^2 - 20^2$
$b^2 = 625 - 400$
$b^2 = 225$
$b = 15$ ft

$1^2 = 1 \times 1 = 1$)+3

$2^2 = 2 \times 2 = 4$)+5

$3^2 = 3 \times 3 = 9$)+7

16)+9

25

Elementary School Lesson

How to do math
without a calculator!!!!

Adding

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 365 \\ +\ 487 \\ \hline 852 \end{array}$$

$$\begin{array}{r} 365 \\ +\ 487 \\ \hline 742 \\ {\scriptstyle 1\ 1} \\ \hline 852 \end{array}$$

$$\begin{array}{r} 365 \\ +\ 487 \\ \hline \end{array}$$

$300 + 400 = 700$

$60 + 80 = 140$

$5 + 7 = 12$

$$\begin{array}{r} 12 \\ \hline 852 \end{array}$$

Subtracting

$$\begin{array}{r} {\scriptstyle 5}\ {\scriptstyle 11} \\ 6\cancel{2}\cancel{1}3 \\ -\ 367 \\ \hline 256 \end{array}$$

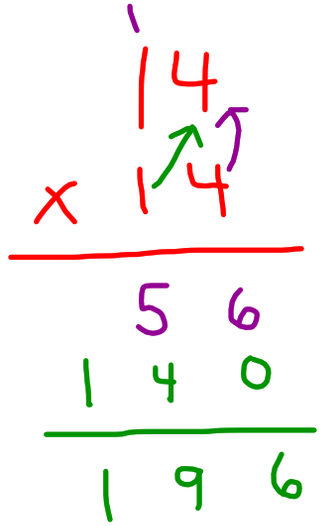
$$\begin{array}{r} 6\,|2\,|3 \\ -\ 367 \\ \hline \cancel{3}\cancel{6} \\ \boxed{256} \end{array}$$

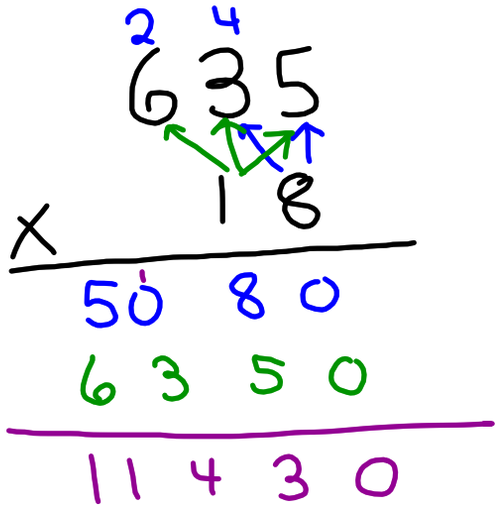
$$\begin{array}{r} 623 \\ -\ 367 \\ \hline -4 \\ -40 \\ 300 \end{array}$$

$300 - 40 - 4$

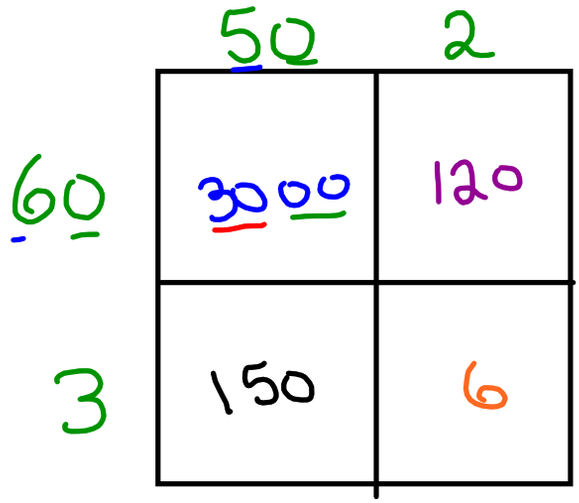
256

Multiplying



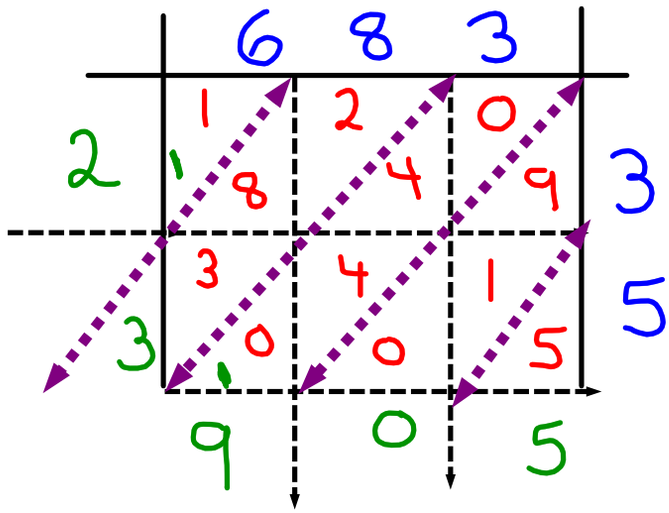

2 4
6 3 5
X 1 8
5 0 8 0
6 3 5 0
1 1 4 3 0

52 x 63



3000
+ 120
150
6
3276

$683 \times 35 = 23\,905$

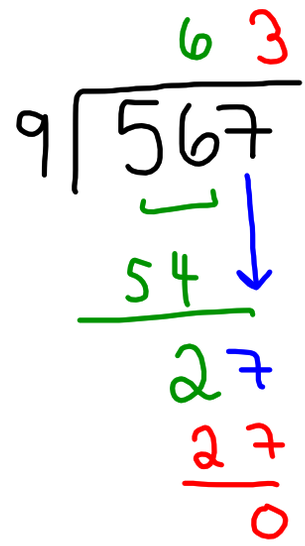


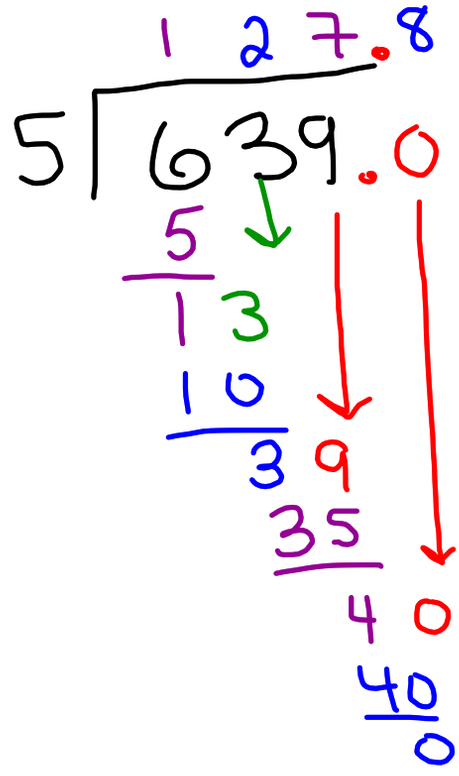
$18^2 = 18 \times 18$

Dividing

$567 \div 9$

$639 \div 5$





Mid Unit Review

Page: 21
Questions:
2acd,3abcd,4ac,5,6,7, 8ab,9,10, 11ace

Pythagorean Theorem Answers

1) 8.1 2)5.2 3)13.8 4) 12.7

5) 11.8 6) 3.5 7) No 8) Yes

9) No 10)Yes 11)5.6 12) 8.8

13) 1.9 14) 10.1

Name : _____ Score : _____

Teacher : _____ Date : _____

3)

991 + 379	484 + 780	452 + 385	906 + 321	753 + 988	115 + 969
216 - 116	419 - 402	931 - 567	751 - 438	694 - 397	619 - 580
154 x 35	771 x 12	748 x 37	409 x 79	211 x 97	904 x 32
$7\overline{)8122}$	$7\overline{)2856}$	$5\overline{)6275}$	$2\overline{)7832}$	$3\overline{)7165}$	$8\overline{)2340}$

Math-Aids.Com

ime : _____ Score : _____

eacher : _____ Date : _____

991 + 379 = 1,370	484 + 780 = 1,264	452 + 385 = 837	906 + 321 = 1,227	753 + 988 = 1,741	115 + 969 = 1,084
216 - 116 = 100	419 - 402 = 17	931 - 567 = 364	751 - 438 = 313	694 - 397 = 297	619 - 580 = 39
154 x 35 = 5,390	771 x 12 = 9,252	748 x 37 = 27,676	409 x 79 = 32,311	211 x 97 = 20,467	904 x 32 = 28,928
1160 r 2	408	1255	3916	2388 r 1	292 r 4
7) 8122	7) 2856	5) 6275	2) 7832	3) 7165	8) 2340

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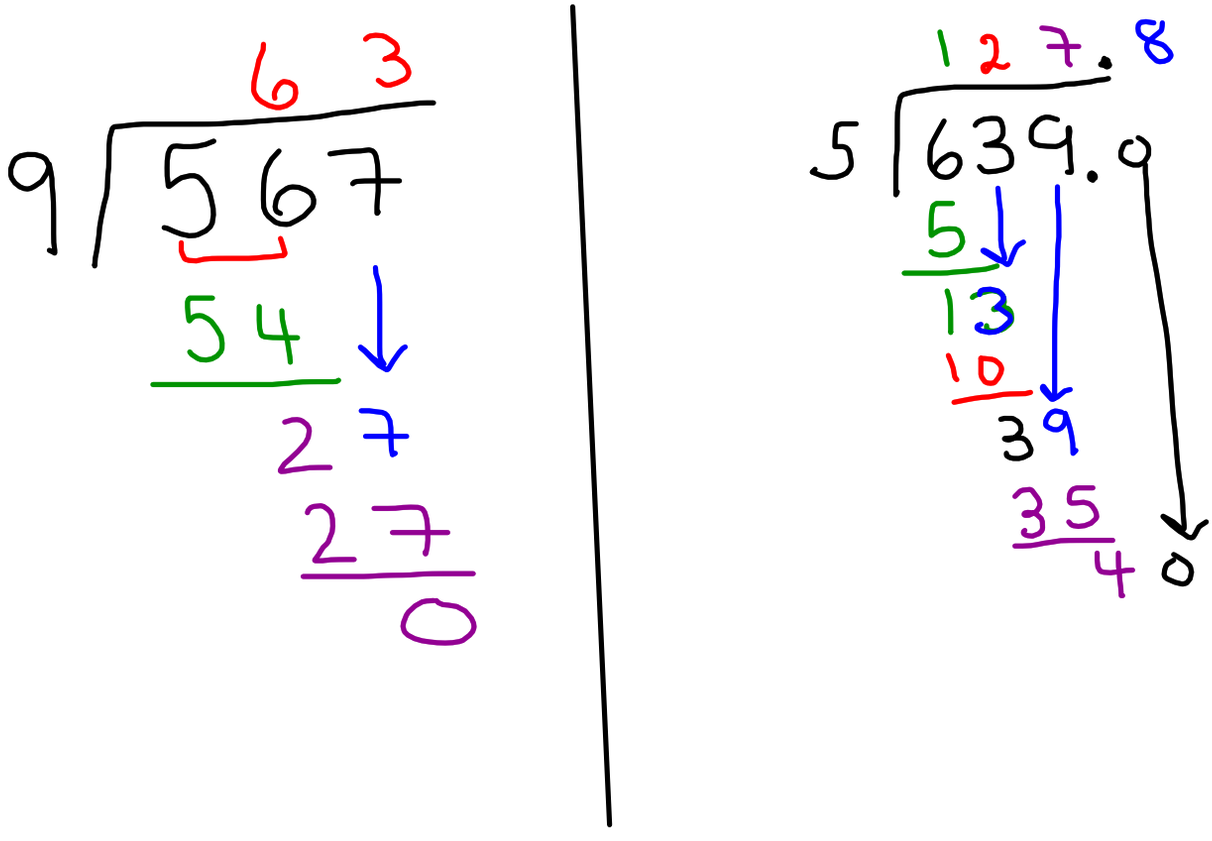
$567 \div 9$

$639 \div 5$



Name : _____ Score : _____

Teacher : _____ Date : _____

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936 + 441	769 + 194	191 + 153	888 + 284	782 + 975	381 + 466
509 - 426	701 - 247	940 - 203	757 - 315	944 - 116	794 - 502
151 x 91	320 x 17	552 x 83	412 x 70	925 x 49	205 x 20
$4\overline{)8698}$	$7\overline{)3250}$	$7\overline{)6595}$	$9\overline{)7758}$	$7\overline{)7693}$	$4\overline{)3416}$

Name : _____ Score : _____

Teacher : _____ Date : _____

1,115 + 4,172	7,141 + 4,691	3,464 + 1,905	3,913 + 7,513	7,652 + 6,417	3,739 + 8,920

886 - 867	500 - 374	766 - 313	558 - 490	439 - 351	282 - 150

251 x 28	122 x 13	188 x 51	266 x 15	949 x 68	380 x 44

$11\overline{)91}$	$11\overline{)82}$	$10\overline{)94}$	$29\overline{)99}$	$10\overline{)81}$	$10\overline{)99}$