## Math Review

## Grades 7-9 or so

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## Math Review

$\qquad$

## Solve the following:

$10 \%$ of $47=$ $\qquad$
$16 \%$ of $87=$ $\qquad$
$27 \%$ of $98.3=$ $\qquad$

## Rounding Practice

Round to the nearest ten thousand:
576,836,937 $\qquad$
Round to the nearest hundred:
46,386,681 $\qquad$
Round to the nearest hundred thousand: 96,784,452,392 $\qquad$

## Math vocabulary

What are supplementary angles?

Draw two perpendicular lines:

What does congruent mean? Equal/the same
What is a polygon?

What are these figures called?


| Percentages Practice |  |
| :---: | :---: |
| Change the percent to a decimal: |  |
| 20\% . 20 | 0.7\% 0.007 |
| 36\% . 36 | 132\% 1.32 |
| Change the percent to a fraction: |  |
| 43\% 43/100 | $65 \% 65 / 100=13 / 20$ |
| $25 \% 25 / 100=1 / 4$ | $88 \% 88 / 100=11 / 25$ |


| Fraction Practice |  |
| :--- | :---: |
| $\frac{4}{8}+\frac{3}{6}=1$ | $\frac{6}{15}+\frac{1}{6}=\frac{17}{30}$ |
| $\frac{1}{3}-\frac{2}{7}=\frac{1}{21}$ | $1 \frac{5}{7} \times \frac{3}{5}=\frac{36}{35}=1 \frac{1}{35}$ |
| $\frac{6}{9} \times \frac{3}{12}=\frac{1}{6}$ | $\frac{7}{8} \div \frac{1}{4}=\frac{7}{2}=31 / 2$ |

[^0]
## Solve the following:

$10 \%$ of $47=4.7$
$16 \%$ of $87=13.92$
$27 \%$ of $98.3=26.541$

## Rounding Practice

Round to the nearest ten thousand:
576,836,937 576, 840,000
Round to the nearest hundred:
46,386,681 46,386,700
Round to the nearest hundred thousand:
96,784,452,392 96,784,500,000

## Math vocabulary

What are supplementary angles? Two angles that add up to $180^{\circ}$

Draw two perpendicular lines:


What does congruent mean? Equal/the same
What is a polygon? A closed 2-dimensional figure made up of line segments. (Usually of more than 3 sides)

What are these figures called?

trapezoid

rhombus

pentagon
$\qquad$


## Solve the following:

$20 \%$ of $58.60=$ $\qquad$
$23 \%$ of $74=$ $\qquad$
$45 \%$ of $92=$ $\qquad$
$7 \%$ of $68=$ $\qquad$

| Division | Addition |
| :--- | ---: |
|  | 7.643 |
| $2 . 3 \longdiv { 4 4 6 2 }$ | +835.1 |

## Triangles

Find the missing angles:


## Circles

What is the diameter? $\qquad$
What is the circumference of the circle? $\qquad$

What is the area of the circle? $\qquad$


## Algebra:

$2 \mathrm{x}+7 \mathrm{x}=$ $\qquad$
$-4+11=$ $\qquad$
$3^{4}=$ $\qquad$
$\mathrm{x}^{4} \cdot \mathrm{x}^{4}=$ $\qquad$
$2 x^{3}+6 x^{3}=$ $\qquad$
$-3(4 x+2)=$ $\qquad$
$\frac{x^{8} y^{2}}{x^{2} y^{5}}=$ $\qquad$
$\qquad$

| Percentages Practice |
| :---: |
| Change the percent to a decimal: |
| 17\% . 17 167\% 1.67 |
| 50\% . 5 . $2 \% 0.002$ |
| Change the percent to a fraction: |
| $75 \% 75 / 100=3 / 4 \quad 90 \% 90 / 100=9 / 10$ |
| $48 \% 48 / 100=12 / 25 \quad 13 \% 13 / 100$ |


| Fraction Practice |
| :--- |
| $\frac{2}{7}+\frac{5}{9}=53 / 63$ |
| $\frac{3}{11}-\frac{1}{7}=\frac{10}{21} \times \frac{7}{24}=\frac{1}{6}$ |
| $6 \frac{1}{3}+8 \frac{3}{12}=14 \frac{7}{12} \quad \frac{6}{7} \div \frac{3}{14}=4$ |

## Circles

What is the diameter? 8

## Triangles

Find the missing angles:

$$
3.14 \times 8=25.12
$$

What is the area of the circle? $\pi \mathrm{r}^{2}=3.14 \times 4^{2}=3.14$ x $16=50.24$


## Solve the following:

$20 \%$ of $58.60=.2 \times 58.60=11.72$
$23 \%$ of $74=.23 \times 74=17.02$
$45 \%$ of $92=41.4$
$7 \%$ of $68=4.76$

| Division | Addition |
| :--- | ---: |
| $2.3 \lcm{1940} 4462$ | 7.643 |
|  |  |
|  |  |
|  | 842.743 |

## Algebra:

$2 \mathrm{x}+7 \mathrm{x}=9 \mathrm{x}$
$-4+11=7$
$3^{4}=81$
$\mathrm{x}^{4} \cdot \mathrm{x}^{4}=\mathrm{x}^{8}$
$2 \mathrm{x}^{3}+6 \mathrm{x}^{3}=8 \mathrm{x}^{3}$
$-3(4 x+2)=-12 x-6$
$\frac{x^{8} y^{2}}{x^{2} y^{5}}=\frac{x^{6}}{y^{3}}$

## Math Review

| Percentages |  |
| :--- | :--- |
| Change the fraction to a percent: |  |
| $2 / 5$ | $7 / 10$ |
| $1 / 2$ |  |
| $1 / 2$ of $30 \%=$ |  |
| $\frac{2}{7}$ of $45 \%=$ |  |

## Mean Mode Median Range

## 1,3,7,7,8,9,15

What is the range of the numbers above?

What is the mode of the numbers above?
$\qquad$

What is the median of the numbers above?

What is the mean of the numbers above?
$13^{2}=$ $\qquad$ $7^{2}=$ $\qquad$ $17^{2}=$ $\qquad$

| $2^{2}=$ | $15^{2}=$ | $10^{2}=$ |
| :--- | :--- | :--- |
| $10^{2}=\square$ | $3^{2}=$ | $6^{2}=\square$ |
| $16^{2}=\square$ | $5^{2}=\square$ | $11^{2}=\square$ |
| $14^{2}=\square$ | $9^{2}=$ | $12^{2}=$ |

## Solve the following:

$30 \%$ of $56=$ $\qquad$
$11 \%$ of $55=$ $\qquad$
$2 \%$ of $80=$ $\qquad$

## Mean Mode Median Range

5,2,8,42,2,9,11,2,7

What is the range of the numbers above?
$\qquad$
What is the mode of the numbers above?

What is the median of the numbers above?

What is the mean of the numbers above?

## Square Roots

| $\sqrt{4}=\_$ | $\sqrt{225}=\_$ | $\sqrt{81}=\square$ |
| :--- | :--- | :--- |
| $\sqrt{256}=\square$ | $\sqrt{16}=\square$ | $\sqrt{100}=\square$ |
| $\sqrt{169}=\square$ | $\sqrt{49}=\square$ | $\sqrt{289}=\square$ |
| $\sqrt{36}=\square$ | $\sqrt{324}=\square$ | $\sqrt{196}=\square$ |

## Percentages

## Change the fraction to a percent:

$\begin{array}{ll}2 / 540 \% & 7 / 1070 \% \\ 1 / 2 & 50 \%\end{array} \quad 4 / 2516 \%$
$1 / 2$ of $30 \%=1 / 2 \cdot 30 / 100=30 / 200=3 / 20$
$\frac{2}{7}$ of $45 \%=\frac{2}{7} \cdot \frac{45}{100}=\frac{9}{70}$

## Mean Mode Median Range

## 1,3,7,7,8,9,15

What is the range of the numbers above?

$$
15-1=14
$$

What is the mode of the numbers above?

$$
7
$$

What is the median of the numbers above?

$$
7 \text { 1,3,7,7,8,8,9,15 }
$$

What is the mean of the numbers above?

$$
1+3+7+7+8+9+15=50 \quad 50 \div 7=7.14
$$

## Squares

| $13^{2}=169$ | $7^{2}=49$ | $17^{2}=289$ |
| :--- | :--- | :---: |
| $8^{2}=64$ | $15^{2}=225$ | $12^{2}=144$ |
| $10^{2}=100$ | $3^{2}=9$ | $6^{2}=36$ |
| $16^{2}=256$ | $5^{2}=25$ | $11^{2}=121$ |
| $14^{2}=196$ | $9^{2}=81$ | $18^{2}=324$ |

## Solve the following:

$30 \%$ of $56=16.8$
$11 \%$ of $55=6.05$
$2 \%$ of $80=1.6$

## Mean Mode Median Range

5,2,8,42,2,9,11,2,7
$2,2,2,5,7,8,9,11,42$
What is the range of the numbers above?
$42-2=40$
What is the mode of the numbers above?
2
What is the median of the numbers above?

$$
7 \text { 2,2,2,5,7,8,9,11,42 }
$$

What is the mean of the numbers above?
$2+2+2+5+7+8+9+11+42=88 \quad 88 \div 9=9.78$

## Square Roots

| $\sqrt{4}=2$ | $\sqrt{225}=25$ | $\sqrt{81}=9$ |
| :--- | :--- | :--- |
| $\sqrt{256}=16$ | $\sqrt{16}=4$ | $\sqrt{100}=10$ |
| $\sqrt{169}=13$ | $\sqrt{49}=7$ | $\sqrt{289}=17$ |
| $\sqrt{36}=6$ | $\sqrt{324}=18$ | $\sqrt{196}$ |

$\qquad$

## Solve the following:

$15 \%$ of $66.20=$ $\qquad$
$27 \%$ of $79=$ $\qquad$
$8 \%$ of $35=$ $\qquad$
$12 \%$ of $82=$ $\qquad$

## Division

$. 1 7 \longdiv { 8 2 . 1 1 }$

$$
\left[\begin{array}{ll}
\frac{1}{8}+\frac{5}{7}= & \frac{3}{40} \times \frac{8}{9}= \\
\frac{2}{7}-\frac{8}{28}= & 3 \frac{1}{3}+\frac{5}{8}= \\
2 \frac{1}{4}-1 \frac{4}{9}= & \frac{3}{8} \div \frac{5}{18}=
\end{array}\right.
$$

$\qquad$
Fraction Practice

| $\frac{1}{8}+\frac{5}{7}=$ | $\frac{3}{40} \times \frac{8}{9}=$ |
| :--- | :---: |
| $\frac{2}{7}-\frac{8}{28}=$ | $3 \frac{1}{3}+\frac{5}{8}=$ |
| $2 \frac{1}{4}-1 \frac{4}{9}=$ | $\frac{3}{8} \div \frac{5}{18}=$ |

## Cylinder

What is the radius?


What is the formula for the volume of a cylinder?

What is the volume of the cylinder?
$487.0=$
$108 \times 10^{6}=$
$0.0041 \times 10^{5}=$
$2,371,083=$

## Right Triangles

 triangle?
## Scientific Notation

$0.00057=$
$68=$

Addition
14.87
$+0.752$

A right triangle has a long leg of 8 and a short leg of 6 , what is the hypotenuse of this triangle?

A right triangle has a hypotenuse of 13 and a short leg of 5 , what is the length of the other leg of this
$\qquad$
$\qquad$

## Percentages Practice

Change the percent to a decimal:
$3 \% \quad 0.03$. $02 \% 0.0002$
37\% . 37 99\% . 99
Change the percent to a fraction:
$55 \% \quad 55 / 100=11 / 20 \quad 14 \% \quad 14 / 100=7 / 50$
Change the fraction to a percent:
$\frac{6}{12} 0.5=50 \% \quad \frac{18}{24} 0.75=75 \%$

## Fraction Practice

$\begin{array}{lc}\frac{1}{8}+\frac{5}{7}=\frac{47}{56} & \frac{3}{40} \times \frac{8}{9}=\frac{1}{15} \\ \frac{2}{7}-\frac{8}{28}=0 & 3 \frac{1}{3}+\frac{5}{8}=\frac{95}{24}=3 \frac{23}{24}\end{array}$
$2 \frac{1}{4}-1 \frac{4}{9}=\frac{29}{36} \quad \frac{3}{8} \div \frac{5}{18}=\frac{27}{20}=1 \frac{7}{20}$

## Cylinder

What is the radius? 4


What is the formula for the volume of a cylinder? $\pi r^{2} h$

What is the volume of the cylinder? $3.14 \times 4^{2} \times 10=502.4$

## Solve the following:

$15 \%$ of $66.20=9.93$
$27 \%$ of $79=21.33$
$8 \%$ of $35=2.8$
$12 \%$ of $82=9.84$

## Division

.17 $\begin{array}{r}483 \\ 82.11\end{array}$

## Addition

14.87
$+0.752$
15.622

## Right Triangles

A right triangle has a long leg of 8 and a short leg of 6 , what is the hypotenuse of this triangle? 10

A right triangle has a hypotenuse of 13 and a short leg of 5 , what is the length of the other leg of this triangle? 12

## Scientific Notation

$0.00057=$
$68=\quad \begin{aligned} & 5.7 \times 10^{-4} \\ & \\ & 6.8 \times 10^{1}\end{aligned}$
$487.0=$
$4.870 \times 10^{2}$
$108 \times 10^{6}=$
$1.08 \times 10^{8}$
$0.0041 \times 10^{5}=$
$4.1 \times 10^{2}$
$2,371,083=$
$2.37 \times 10^{6}$

Algebra:

$$
\begin{aligned}
& 7^{-2}=\frac{1}{49} \\
& 3^{-5} \cdot 3^{8}=3^{3} \\
& .827 \cdot 10^{-2}=0.00827 \\
& 2.56 \cdot 10^{3}=2560 \\
& 5 x^{4}+-7 x^{4}=-2 x^{4} \\
& -3 x^{2}(5 y+8 x)= \\
& -15 x^{2} y+-24 x^{3} \\
& \frac{x^{-6} y^{3}}{x^{2} y^{7}}=\frac{1}{x^{8} y^{4}}
\end{aligned}
$$

Math Review
Name: $\qquad$

## Solve the following:

$40 \%$ of $76=$ $\qquad$
$13 \%$ of $98=$ $\qquad$
$7 \%$ of $64=$ $\qquad$

## Mean Mode Median Range

6,1,9,3,7,13,9
What is the range of the numbers above?
$\qquad$
What is the mode of the numbers above?
$\qquad$
What is the median of the numbers above?
$\qquad$
What is the mean of the numbers above?
$\qquad$

## Squares

| $16^{2}=$ | $15^{2}=$ | $1^{2}=\square$ |
| :--- | :--- | :--- |
| $5^{2}=$ | $18^{2}=$ | $6^{2}=\square$ |
| $14^{2}=$ | $10^{2}=\square$ | $12^{2}=\square$ |
| $13^{2}=\square$ | $11^{2}=\square$ | $17^{2}=\square$ |
| $9^{2}=$ | $0^{2}=$ | $7^{2}=$ |

## Mean Mode Median Range

$23,17,3,6,3,7,3,3,7$

What is the range of the numbers above?
$\qquad$
What is the mode of the numbers above?

What is the median of the numbers above?

What is the mean of the numbers above?

## Square Roots

$\sqrt{49}=\quad \sqrt{169}=\quad \sqrt{225}=$ $\sqrt{81}=\quad \sqrt{324}=\quad \sqrt{196}=$
$\sqrt{4}=$ $\qquad$ $\sqrt{144}=$ $\qquad$
$\qquad$
$\qquad$ $\sqrt{289}=$ $\qquad$
$\sqrt{256}=$ $\qquad$ $\sqrt{36}=$ $\qquad$ $\sqrt{100}=$ $\qquad$

## Solve the following:

$40 \%$ of $76=30.4$
$13 \%$ of $98=12.74$
$7 \%$ of $64=4.48$

## Mean Mode Median Range

$23,17,3,6,3,7,3,3,7$

$$
3,3,3,3,6,7,7,17,23
$$

What is the range of the numbers above?
$23-3=20$

What is the mode of the numbers above? 3

What is the median of the numbers above? 6

What is the mean of the numbers above?

$$
72 \div 9=8
$$

## Square Roots

| $\sqrt{49}=7$ | $\sqrt{169}=13$ | $\sqrt{225}=15$ |
| :--- | :--- | :--- |
| $\sqrt{81}=9$ | $\sqrt{324}=18$ | $\sqrt{196}=14$ |
| $\sqrt{4}=2$ | $\sqrt{144}=12$ | $\sqrt{289}=17$ |
| $\sqrt{256}=16$ | $\sqrt{36}=6$ | $\sqrt{100}=10$ |

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[^0]:    ## Volume

    What is the volume of this rectangular solid?
    

