Instructions: Answer each question on loose leaf, quad-ruled (graph paper), headed properly and written in lead-graphite. Remember to fold paper along the center, work exercises in order top to bottom, left column then right column. Staple multiple pages

1. a) Gv1 pg. 63 # 2 b) Gv1 pg. 63 #6
   c) Gv1 pg. 63 #7

2. a) Gv1 pg. 57 # 20 b) Gv1 pg. 57 # 22
   c) Gv1 pg. 57 #24

3. a) Gv1 pg. 47 #16 b) Gv1 pg. 49 #33
   c) Gv1 pg. 49 # 38

4. Simplify Using Exponent Laws: *"When in doubt, write it out!"*

   a) $\left(6x^3\right)\left(4x^4\right)$ b) $6\left(x^3\right)^4$ c) $\left(6x^2\right)^3$

5. a) Gv1 pg. 93 #4 b) Gv1 pg. 94 # 12
   c) State all the number sets the number $\sqrt[3]{-1728}$ belongs to.

6. Simplify the radical expressions:
   a) $\sqrt{125}$ b) $\sqrt{98}$ c) $\sqrt[3]{128}$

7. Solve for the unknown.
   a) $n^2 = 441$ b) $x^2 = -64$ c) $n^3 = -2,744$

8. Determine the perimeter of a square with the given area:
   a) $676\,in^2$ b) $2.56\,cm^2$ c) $0.0729\,mm^2$

9. Determine the surface area of a cube with the given volume:
   a) $3,375\,in^3$ b) $0.216\,cm^3$ c) $0.001728\,m^3$

10. a) Gv1 pg. 94 #14 b) Gv1 pg. 95 #28
    c) Gv1 pg. 95 #32

11. Convert the repeating decimals to fractions:
    a) $0.5\overline{2}$ b) $3\overline{.52}$ (write as a mixed number)
    c) $0.54\overline{2}$

12. Simplify:
    a) $-8 \div 4 \bullet 4 - 2$ b) $13 - 9 + 4 \div 2 \bullet 2$
    c) $-24 \div \sqrt[3]{8}\,(7 - 5 + 6) \div 24 - 3$

13. Simplify:
    a) $-4 - 4(2 - x)$ b) $-5x + 2(-4 - 3x) + 9$
    c) $9y^2 + 3(3y - 4x^2) + 8x^2 - 2x$

14. Evaluate the expressions for the given values of the variables; include the units!

    a) $\dfrac{F}{m}$, where $F = 100\,kg\,\dfrac{m}{s^2}$, and $m = 24\,kg$

    b) $7.2D$, where $D = 24\,hrs$

    c) $0.76g$, where $g = 9.8\,{}^m\!/\!{}_{s^2}$

15. Determine the sum or difference; write as a fraction and decimal.

    a) $\dfrac{3}{8} + \dfrac{1}{6} =$ b) $4 - \dfrac{9}{8}$ c) $0.8 - \dfrac{3}{8}$

16. Solve for the unknown; write your solutions as a fraction and decimal

    a) $-8b = 27$ b) $-7n = 16$ c) $.75x = \dfrac{1}{4}$

17.
    Brett used a calculator to find the decimal expansions of various square roots as shown.

$\sqrt{3}$ = 1.732050807...
$\sqrt{6}$ = 2.449489742...
$\sqrt{11}$ = 3.316624790...
$\sqrt{15}$ = 3.872983346...

    According to these expansions, which of the following expressions is the greatest?

    a) $3 + \sqrt{15}$ b) $5 + \sqrt{6}$ c) $8 - \sqrt{3}$ d) $10 - \sqrt{11}$

Instructions: Answer each question on loose leaf, quad-ruled (graph paper), headed properly and written in lead-graphite. Remember to fold paper along the center, work exercises in order top to bottom, left column then right column. Staple multiple pages

18.

> **11**   **Which of these pairs of distances are 5 times the other distance? Select *two* that apply.**
>
> A.   a distance of 2×10^3 km and a distance of 2×10^{15} km
>
> B.   a distance of 2×10^4 km and a distance of 2×10^9 km
>
> C.   a distance of 2×10^7 km and a distance of 4×10^8 km
>
> D.   a distance of 4×10^{13} km and a distance of 2×10^{14} km
>
> E.   a distance of 8×10^5 km and a distance of 4×10^6 km
>
> F.   a distance of 8×10^{16} km and a distance of 8×10^{17} km

19. A square has an area of $8\,cm^2$; what is the *approximate* perimeter of the square?

20.

> **25**   **The value of $2\sqrt{2}$ can be approximated as $\dfrac{17}{6}$, while the value of *e*, a widely used irrational number, can be approximated as 2.72. Which approximation is farther to the left on a number line?**
>
> A.   2.72, because it is less than $\dfrac{17}{6}$
>
> B.   2.72, because it is greater than $\dfrac{17}{6}$
>
> C. $\dfrac{17}{6}$, because it is less than 2.72
>
> D. $\dfrac{17}{6}$, because it is greater than 2.72