Student Name _____

Parent Sign _____

Pre-Alg.
2nd 9 Weeks
Test Review

1) 124 all factors means every number that will divide into the number, not just prime numbers
1, 2, 4, 31, 62, 124
(D)

2) $x^3 - 4^0$
$3^3 - 8^0$ ←
3·3·3 (anything to zero power is 1)
27 − 1
26
(A)

3) 28, 48 GCF = biggest number that divides into both
Factors:
28: 1, 2, 4, 7, 14, 28
48: 1, 2, 3, 4, 6, 8, 12, 16, 24, 48
biggest that is in both
(D)

4) $\frac{16}{22} \div 2 = \frac{8}{11}$
(C)

5) $t^7 \cdot t^8$ Multiply with same base: keep base the same, ADD exponents
t^{7+8}
t^{15}
(D)

6) $\frac{(-9)^{10}}{(-9)^3}$ Divide with same base: keep base the same, SUBTRACT exponents
$(-9)^{10-3}$
$(-9)^7$
(B)

7) 2.12×10^{-4} Exponent Positive: move right Negative: move left
2.12
.000212
(C)

8) 8,000,000,000
must place decimal so that number is between 1.? and 9.?
8.0×10^9
(D)

9) Compare exponents first. If any exponents are the same, then compare decimals.
9.335×10^2 ← Alum.
$\rightarrow 1.2351 \times 10^3$] Silver
$\rightarrow 1.33758 \times 10^3$] Gold
$\rightarrow 1.808 \times 10^3$] Iron
(A)

10) $\frac{4}{5}$ ___ 0.125
$5\overline{)4.0}$ .8
40
.8 > 0.125
(C)

11) See #9
1.5×10^{-18} ← Proton
$\rightarrow 1.44 \times 10^{-15}$] Neutron
$\rightarrow 2.8 \times 10^{-15}$] Electron
(D)

12) $-\frac{8}{11} \cdot \frac{5}{9} = -\frac{40}{99}$
Mult. numerators
Mult. denominators
(C)

13) $D = rt$
$D = (40)(2\frac{3}{4})$ Make both into fractions
$D = \left(\frac{40}{1}\right)\left(\frac{11}{4}\right) = \frac{110}{1} = 110$
(B)

14) $D = rt$

$255 = 60t$

div. by 60

$\frac{255}{60} = \frac{60t}{60}$

$4\frac{15}{60} = t$

$4\frac{1}{4} = t$

(B)

15) $6 \div \frac{3}{4}$ Multiply by reciprocal

$\frac{6}{1} \div \frac{3}{4}$

$\frac{2\cancel{6}}{1} \times \frac{4}{\cancel{3}_1}$

$\frac{8}{1}$

8

(B)

16) $\frac{4}{5} + (-\frac{3}{10})$ Must have common denominator to add/subtract

$\frac{4}{5} \times 2 \quad \frac{8}{10}$

$+(-\frac{3}{10}) \quad -\frac{3}{10}$

$\frac{5}{10} \div 5 = \frac{1}{2}$

(B)

17) 3, 8, 4 hcm = smallest number they all divide into

L method – do 2 numbers at a time

1	3 8
	3 8

$1 \times 3 \times 8 = 24$

2	24 4
2	12 2
	6

$2 \times 2 \times 6 \times 1 = 24$

(A)

18) $\frac{12 \text{ balls}}{2 \text{ boxes}} = \frac{78 \text{ balls}}{x \text{ boxes}}$ cross multiply

$12x = 156$

$\frac{12x}{12} = \frac{156}{12}$

$x = 13$

(A)

then divide

$12\overline{)156}$ 13

12

36

36

19) 5 in = 12.5 ft

this has to be 1 in, so divide by 5

$5\overline{)12.5}$ 2.5

10

25

25

$1 \text{ in} = 2.5 \text{ ft}$

(C)

20) 6 in = 972 mi

this has to be 1 in, so divide by 6

$6\overline{)972}$ 162

6

37

36

12

12

$1 \text{ in} = 162 \text{ mi}$

(A)

21) 53% percent is out of 100

$\frac{53}{100}$ (D)

22) 3.7% move decimal 2 places left

3.7

.037 (D)

23) 64 20% is .20

$\times .20$

00

1280

12.80 (discount)

64.00

-12.80

$51.20 (sale price)

(D)

24) closest means estimate

.3751 → use .4

.7254 → use .7

$.28 \Rightarrow .3$ (B)

25) 246,314,233 see note for #8

↑ round to nearest tenth

2.5×10^8 (D)