STAPLE

Name _____

Gillespie

Course 3: Ch1 Test – C

Rational Numbers

Directions: When working each of the following questions, be sure to show all work. Be sure to round any decimals to the nearest hundredth.

1) Express $-2\frac{2}{5}$ as a decimal

a) -2.375

b) -2.4

c) 2.4

d) 2.375

2) Express 5.24 as a fraction or mixed number in simplest form

a) $5\frac{3}{12}$

b) $5\frac{6}{25}$

c) $5\frac{12}{50}$

d) $5\frac{24}{100}$

3) Simplify $\left(\frac{3}{5}\right)^2$

a) $\frac{3}{4}$

b) $\frac{3}{12}$

c) $\frac{9}{25}$

d) $\frac{9}{5}$

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4) Simplify $(3)^3 - (2)^3$

a) 19

b) -19

c) 21

d) 23

5) Evaluate $(m-n)^2 + (m)^2 \ \ if\ m = -3\ and\ n = -4$

a) -10

b) -8

c) 8

d) 10

6) Evaluate $(a)^3 * b \ \ if\ a = 3\ and\ b = \frac{1}{3}$

a) -9

b) 9

c) -3

d) 3

7) Express c^{-4} using a positive exponent.

a) $\frac{1}{c^4}$

b) $\frac{1}{c^{-4}}$

c) c^4

d) $none\ of\ the\ above$

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8) Express $\frac{1}{a^{-2}}$ using a positive exponent.

a) $\frac{1}{a^{-2}}$

b) a^2

c) $\frac{1}{a^2}$

d) $none\ of\ the\ above$

9) Evaluate $2b^0$

a) 0

b) 1

c) 2

d) $undefined$

10) Express $\frac{m^3}{n^{-5}}$ using a positive exponent.

a) m^3n^5

b) m^3n^{-5}

c) $\frac{1}{m^3n^5}$

d) $\frac{m^3}{n^{-5}}$

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11) Express 3.25×10^{-3} in standard decimal notation form.

a) $32{,}500$

b) $3{,}250$

c) 0.000325

d) 0.00325

12) Express 6.25×10^{3} in standard decimal notation form.

a) $6{,}250$

b) 625

c) 625.0

d) 0.00625

13) Express 0.0014 in scientific notation.

a) 1.4×10^{-3}

b) 0.0014×10^{3}

c) 1.4×10^{-4}

d) 0.0014×10^{4}

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14) Express $130{,}240$ in scientific notation.

a) 1.3024×10^{4}

b) 0.13024×10^{-4}

c) 1.3024×10^{5}

d) 0.13024×10^{-5}

15) Solve $\sqrt{196}$

a) 11

b) 12

c) 13

d) 14

16) Solve $\sqrt{144}$

a) 11

b) 12

c) 13

d) 14

17) Solve for a if $a^2 = 169$

a) 12

b) 13

c) 14

d) 15

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18) Estimate $\sqrt{120}$

a) ≈ 10

b) ≈ 11

c) ≈ 12

d) ≈ 13

19) Estimate $\sqrt[3]{65}$

a) ≈ -8

b) ≈ 8

c) ≈ -4

d) ≈ 4

20) Estimate to compare 2π *and* $\sqrt{83}$

a) $2\pi < \sqrt{83}$

b) $2\pi = \sqrt{83}$

c) $2\pi > \sqrt{83}$

d) *none of the above*