

HPRS 1204 – Math Review Test

VII. Circle the **smaller** fraction in each pair:

1. $8/17$ or $4/17$

2. $2/11$ or $2/13$

3. $6/13$ or $7/16$

VIII. Add the following fractions and mixed numbers and reduce to the lowest terms:

$$\begin{array}{r} 1. \quad 4 \frac{2}{5} \\ \quad 2 \frac{1}{2} \\ + \quad 3/4 \\ \hline 7 \frac{13}{20} \end{array}$$

$$\begin{array}{r} 2. \quad 4 \frac{2}{3} \\ \quad \frac{1}{4} \\ + \quad 5/6 \\ \hline 5 \frac{3}{4} \end{array}$$

$$\begin{array}{r} 3. \quad 9 \frac{2}{3} \\ \quad 3 \frac{2}{5} \\ + \quad 3/4 \\ \hline 13 \frac{49}{60} \end{array}$$

IX. Subtract the following fractions:

$$\begin{array}{r} 1. \quad 2 \frac{1}{4} \\ - \quad 6 \frac{1}{3} \\ \hline - \frac{49}{12} \text{ or } - 4 \frac{1}{12} \end{array}$$

$$\begin{array}{r} 2. \quad 5 \frac{1}{2} \\ - \quad 1 \frac{1}{3} \\ \hline - \frac{25}{6} \text{ or } - 4 \frac{1}{6} \end{array}$$

$$\begin{array}{r} 3. \quad 6 \frac{1}{4} \\ - \quad 6 \frac{1}{6} \\ \hline \frac{2}{24} \text{ or } \frac{1}{12} \end{array}$$

X. Multiply the following fractions and mixed numbers:

1. $3 \frac{5}{6} \times 4 \frac{1}{8} = \underline{759/48 \text{ or } 15 \frac{39}{48}}$

2. $2 \frac{1}{6} \times 5 \frac{1}{2} = \underline{143/12 \text{ or } 11 \frac{11}{12}}$

3. $1 \frac{2}{4} \times 7 = \underline{42/4 \text{ or } 10 \frac{2}{4} \text{ or } 10 \frac{1}{2}}$

4. $5 \frac{1}{3} \times 2 \frac{6}{8} = \underline{352/24 \text{ or } 14 \frac{16}{24} \text{ or } 14 \frac{4}{6}}$

XI. Change the following decimals to fractions and reduce to the lowest terms:

1. $0.125 = \underline{1/8}$

3. $0.635 = \underline{127/200}$

2. $0.45 = \underline{9/20}$

4. $0.007 = \underline{7/1000}$

XII. Circle the **larger** of the two decimals:

1. 0.3 or 0.06

2. 0.02 or 0.025

3. 0.12 or 0.078

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XIII. Rewrite the following fractions as ratios, percentages, and decimals. (1 pt. each)

| FRACTION | | RATIO | | PERCENTAGE | | DECIMAL |
|-------------------|---|-------------|---|-------------|---|-------------|
| 1. $\frac{2}{5}$ | = | <u>2:5</u> | = | <u>40 %</u> | = | <u>0.40</u> |
| 2. $\frac{2}{9}$ | = | <u>2:9</u> | = | <u>22 %</u> | = | <u>0.22</u> |
| 3. $\frac{8}{28}$ | = | <u>8:28</u> | = | <u>29 %</u> | = | <u>0.29</u> |
| 4. $\frac{6}{15}$ | = | <u>6:15</u> | = | <u>40 %</u> | = | <u>0.40</u> |

XIV. Solve the following percentage problems:

1. 6% of 85 = 5.1
2. 0.8% of 132 = 1.056
3. 1.8% of 28 = 0.504
4. 0.09% of 68 = 0.0612

XV. Solve for “x” in the following proportions:

1. $2 : 7 :: 5 : X/2$; $2X/2 = 35; 2X = 70; X = 35$
2. $1/2 : X :: 2/3 : 12$; $2/3X = 6; X = 18/2; X = 9$
3. $X/15 = 7/20$; $20X = 105; X = 5.25$
4. $13X : 3 :: 1/3 : 1/26$; $13X/26 = 1; 13X = 26; X = 2$
5. $3/4 = 5X/1.5$; $20X = 4.5; X = 0.225$
6. $3 : 14 :: 3/4 : X/3$; $3X/3 = 42/4; X = 42/4; X = 10.5$
7. $X/5 = 3/8$; $8X = 15; X = 15/8; X = 1 \frac{7}{8}$
8. $4/22 = 6/ X/2$; $4X/2 = 132; 4X = 264; X = 66$
9. $5 : 13 :: X/2 : 17$; $13X/2 = 105; 13X = 210; X = 210/13; X = 16 \frac{2}{13}$
10. $8 : 12 :: 5 : 3X$; $24X = 60; X = 60/24; X = 2.5$

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XVI. Convert the following to the equivalent measures indicated:

- | | | | |
|-----|--|-----|-----------------------------------|
| 1. | 0.002 kg = <u>2000</u> mg | 13. | 0.135 L = <u>135</u> mL |
| 2. | 6.5 tbs = <u>3.25, 3.47</u> oz | 14. | 60 gtts = <u>0.13, 0.125</u> tsp |
| 3. | 220 lbs = <u>100</u> Kg | 15. | 96°F = <u>35.6</u> °C |
| 4. | gr iiiiss = <u>233, 210, 227.5</u> mg | 16. | 17.5 cm = <u>6.9</u> in |
| 5. | 0.480 L = <u>0.96, 1</u> pt | 17. | 7 mL = <u>105, 112</u> gtts |
| 6. | 3½ tbs = <u>13.125, 10.5, 14, 11.2</u> tsp | 18. | 150 mg = <u>2.5, 2.3, 2.25</u> g |
| 7. | 35.4°C = <u>95.7</u> °F | 19. | 4 qt = <u>4000, 3840</u> mL |
| 8. | 45 mL = <u>9, 11.25, 12</u> dr | 20. | 3.05 g = <u>3,050</u> mg |
| 9. | dr xxviiss = <u>1546.875, 1650, 2062.5, 1760, 2200</u> m | 21. | 0.45 g = <u>6.75, 7.5, 6.9</u> gr |
| 10. | 103.6°F = <u>39.8</u> °C | 22. | 44°C = <u>111.2</u> °F |
| 11. | 84 lbs = <u>38.18</u> Kg | 23. | 65 Kg = <u>143</u> lbs |
| 12. | 120 cm = <u>47.2</u> in | 24. | 3.5 qt = <u>3.5, 3.36</u> L |

XVII. Convert from traditional times to 24 hour time or vice versa:

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|----|---|----|------------------------------|
| 1. | 10:45 pm = <u>2245</u> hrs. | 5. | 0215 hours = <u>2:15 am</u> |
| 2. | 12:00 (Midnight) = <u>2400 or 0000</u> hrs. | 6. | 2355 hours = <u>11:55 pm</u> |
| 3. | 5: 27 am = <u>0527</u> hrs. | 7. | 1020 hours = <u>10:20 am</u> |
| 4. | 11:15 am = <u>1115</u> hrs. | 8. | 1530 hours = <u>3:30 pm</u> |