

# Math 085 - Quiz 8

March 18, 2013

Name key

Score \_\_\_\_\_

Show all your work to receive full credit. Supply explanations when necessary. Reduce all fractions to lowest terms.

1. (2 points) Divide and simplify.

$$(a) \frac{12}{5} \div (4x) = \frac{12^3}{5} \cdot \frac{1}{4x} = \boxed{\frac{3}{5x}}$$

$$(b) -\frac{15}{28} \div \left(-\frac{9}{20}\right) = \frac{15^5}{28_7} \cdot \frac{20^5}{9_3} = \boxed{\frac{25}{21}}$$

$$(c) \frac{3}{5} \div \frac{9}{4} = \frac{3^1}{5} \cdot \frac{4}{9_3} = \boxed{\frac{4}{15}}$$

$$(d) -\frac{81}{42} \div \frac{33}{56} = -\frac{81^{279}}{42_6} \cdot \frac{56^8}{33_{11}} = \boxed{-\frac{36}{11}}$$

2. (1 point) A triangle has height  $\frac{8}{3}$  yd and base length  $\frac{7}{4}$  yd. Find the area of the triangle.

$$A = \frac{1}{2} \times \frac{7}{4} \times \frac{8}{3} = \boxed{\frac{7}{3} \text{ yd}^2}$$

3. (2 points) Solve each equation.

$$(a) \frac{4}{3}t = -\frac{5}{2} \quad t = -\frac{5}{2} \div \frac{4}{3} = -\frac{5}{2} \cdot \frac{3}{4} = \boxed{-\frac{15}{8}}$$

$$(b) 20x - 18 = 0$$

$$\begin{array}{r} +18 \quad +18 \\ \hline 20x = 18 \\ \frac{20x}{20} = \frac{18}{20} \end{array}$$

$$x = \frac{18^9}{20_{10}} = \boxed{\frac{9}{10}}$$