Geometry

A. Area And Perimeter

Date_____ Hour____

Find the area of each. For #1 - #4, leave your answer in terms of pi.

1)

8 yd

64π yd²

2)

12 yd

144π yd²

3)

18 m

81π m²

4)

24 km

144π km²

5)

5 mi

2 mi

10 mi²

6)

2.9 ft

3 ft

8.7 ft²

7)

5.8 m

11 m

31.9 m²

8)

6.6 mi

12 mi

39.6 mi²

9)

7 m

3.6 m

12.6 m²

10)

3.6 yd

8 yd

14.4 yd²

Geometry
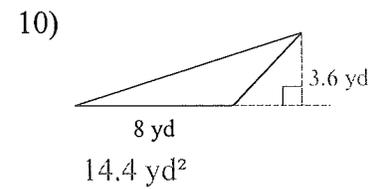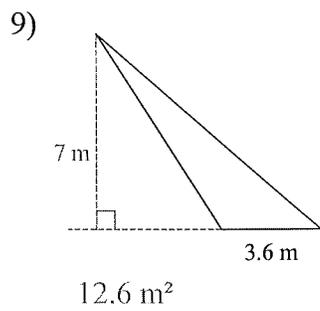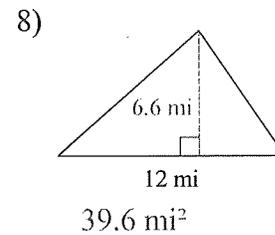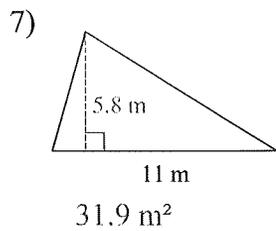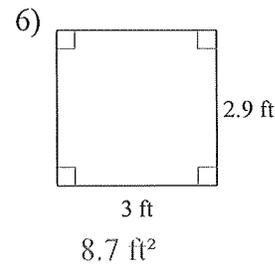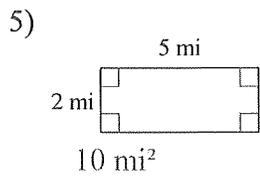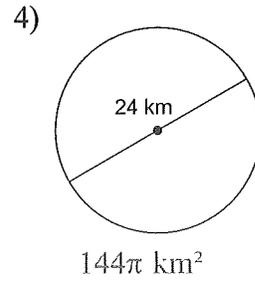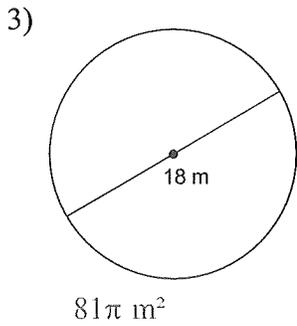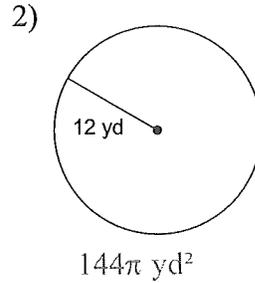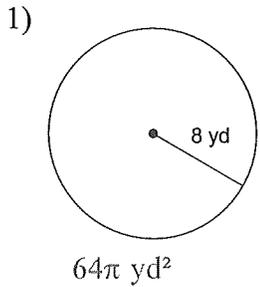
C. Solving Equations

Solve each equation.

1) $-136 = 8 - 4(1 + 5k)$

$\{7\}$

2) $-217 = -7(3 - 4x)$

$\{-7\}$

3) $5 + 2n = 8(1 + 8n) - 3$

$\{0\}$

4) $-8(4 - 3n) = 18 - n$

$\{2\}$

5) $8(3 + 2x) = 8x + 32$

$\{1\}$

6) $5r + 38 = 3(7 - 4r)$

$\{-1\}$

7) $-8x + 8x = -3(x - 6) + 6(x - 5)$

$\{4\}$

8) $-5(6x - 2) + 6 = 4 - 7(7x + 1)$

$\{-1\}$

Geometry

D. Proportions

Solve each proportion.

1) $\dfrac{7}{n} = \dfrac{10}{3}$

2) $\dfrac{10}{7} = \dfrac{6}{n}$

$\{4.2\}$

$\{2.1\}$

3) $\dfrac{7}{k-3} = \dfrac{6}{8}$

4) $\dfrac{10}{7} = \dfrac{k+2}{4}$

$\{3.71\}$

$\{12.33\}$

5) $\dfrac{a}{4} = \dfrac{a+10}{8}$

6) $\dfrac{m+9}{8} = \dfrac{m}{9}$

$\{-81\}$

$\{10\}$

7) $\dfrac{6}{n} = \dfrac{2}{5n-8}$

8) $\dfrac{n-3}{2} = \dfrac{n}{3}$

$\{1.71\}$

$\{9\}$

Geometry

Name_____

E. Slope

Find the slope of each line.

1)
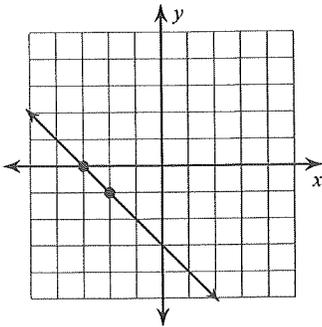
−1

2)
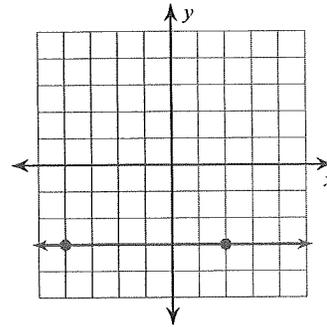
0

3)
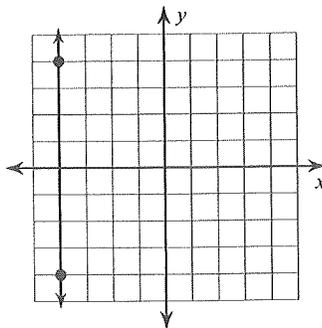
Undefined

4)
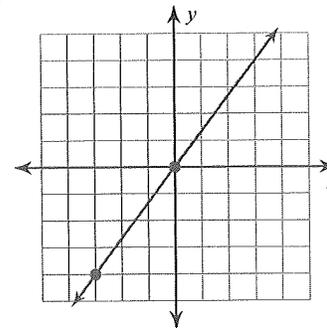
$\dfrac{4}{3}$

Find the slope of the line through each pair of points.

5) $(11, 0), (-1, 0)$

0

6) $(0, 2), (-18, -1)$ $\dfrac{1}{6}$

7) $(6, 1), (-14, -19)$

1

8) $(15, 0), (5, -16)$ $\dfrac{8}{5}$

Name_____

# F. Writing Linear Equations & G. Graphing Linear Equations

Hour____

Write the slope-intercept form of the equation of the line through the given point with the given slope.

1) through: $(-4, -1)$, slope $= -4$

$y = -4x - 17$

2) through: $(-2, 0)$, slope $= -\dfrac{5}{2}$ $\quad y = -\dfrac{5}{2}x - 5$

3) through: $(-1, 2)$, slope $= -3$

$y = -3x - 1$

Write the slope-intercept form of the equation of the line through the given points.

4) through: $(-4, 0)$ and $(-3, 2)$

$y = 2x + 8$

5) through: $(0, -1)$ and $(5, 3)$ $\quad y = \dfrac{4}{5}x - 1$

6) through: $(-4, -1)$ and $(-2, -3)$

$y = -x - 5$

Write the slope-intercept form of the equation of each line.

7)


$$y = \frac{1}{3}x + 1$$
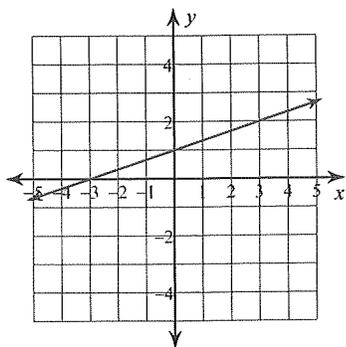
8)

$$y = \frac{1}{3}x + 2$$
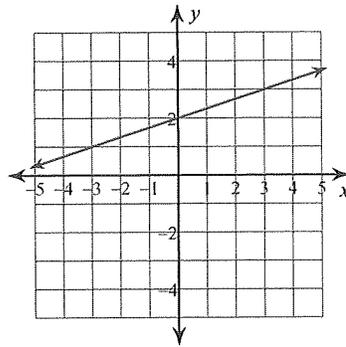
**Sketch the graph of each line.**

9) $y = \dfrac{1}{2}x - 4$
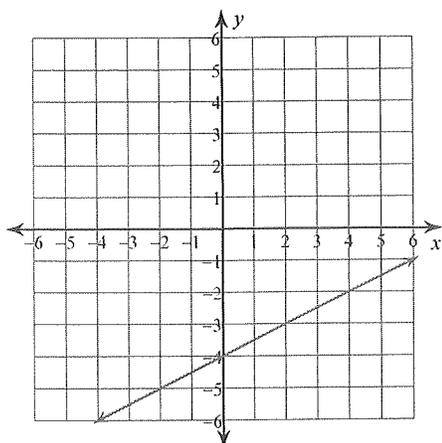

10) $y = -5$
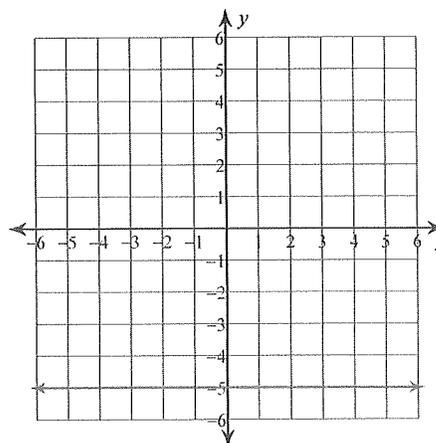
11) $y = -\dfrac{6}{5}x - 1$
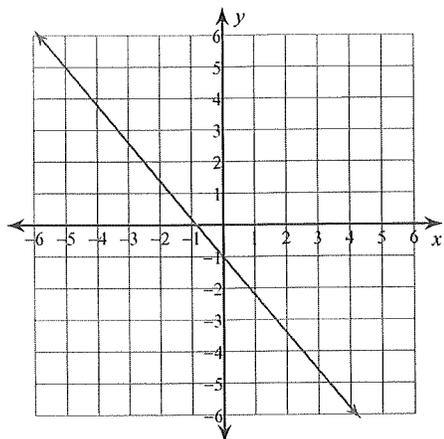
12) $y = 5x + 5$
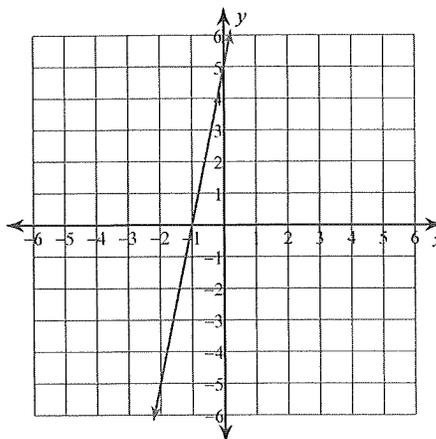
13) $3x + 2y = -4$
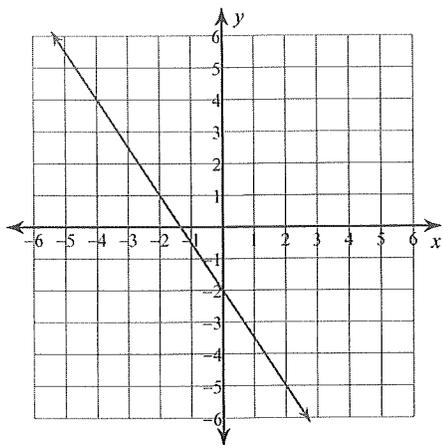
14) $2x - 5y = 0$
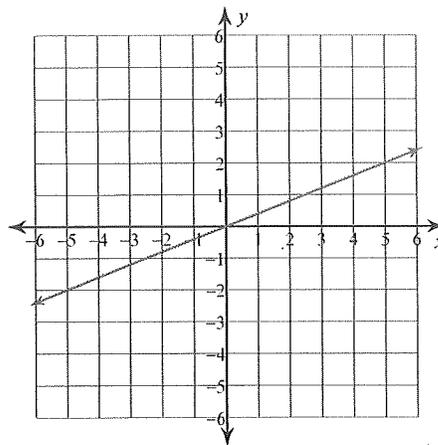
Name : _____   Score : _____

Teacher : _____   Date : _____

Mixed Problems with Fractions

1) $\dfrac{11}{12} + \dfrac{8}{9} =$ $\dfrac{33}{36} + \dfrac{32}{36} =$ $\dfrac{65}{36} =$ $1\dfrac{29}{36}$

2) $\dfrac{5}{15} + \dfrac{2}{4} =$ $\dfrac{20}{60} + \dfrac{30}{60} =$ $\dfrac{50}{60} =$ $\dfrac{5}{6}$

3) $\dfrac{5}{6} + \dfrac{4}{5} =$ $\dfrac{25}{30} + \dfrac{24}{30} =$ $\dfrac{49}{30} =$ $1\dfrac{19}{30}$

4) $\dfrac{8}{12} - \dfrac{1}{3} =$ $\dfrac{8}{12} - \dfrac{4}{12} =$ $\dfrac{4}{12} =$ $\dfrac{1}{3}$

5) $\dfrac{11}{12} - \dfrac{4}{6} =$ $\dfrac{11}{12} - \dfrac{8}{12} =$ $\dfrac{3}{12} =$ $\dfrac{1}{4}$

6) $\dfrac{1}{2} - \dfrac{2}{12} =$ $\dfrac{6}{12} - \dfrac{2}{12} =$ $\dfrac{4}{12} =$ $\dfrac{1}{3}$

7) $\dfrac{9}{18} \times \dfrac{1}{5} =$ $\dfrac{9 \times 1}{18 \times 5} =$ $\dfrac{9}{90} =$ $\dfrac{1}{10}$

8) $\dfrac{3}{6} \times \dfrac{2}{4} =$ $\dfrac{3 \times 2}{6 \times 4} =$ $\dfrac{6}{24} =$ $\dfrac{1}{4}$

9) $\dfrac{4}{5} \times \dfrac{4}{15} =$ $\dfrac{4 \times 4}{5 \times 15} =$ $\dfrac{16}{75}$

10) $\dfrac{8}{14} \div \dfrac{4}{9} =$ $\dfrac{8 \times 9}{14 \times 4} =$ $\dfrac{72}{56} =$ $\dfrac{9}{7} =$ $1\dfrac{2}{7}$

11) $\dfrac{12}{15} \div \dfrac{6}{10} =$ $\dfrac{12 \times 10}{15 \times 6} =$ $\dfrac{120}{90} =$ $\dfrac{4}{3} =$ $1\dfrac{1}{3}$

12) $\dfrac{9}{16} \div \dfrac{11}{18} =$ $\dfrac{9 \times 18}{16 \times 11} =$ $\dfrac{162}{176} =$ $\dfrac{81}{88}$

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Algebra 2

Name_____

L. Simplifying Radicals

Date_____ Period_____

Simplify.

1) $\sqrt{96}$

    $4\sqrt{6}$

2) $\sqrt{12}$

    $2\sqrt{3}$

3) $\sqrt{128}$

    $8\sqrt{2}$

4) $\sqrt{147}$

    $7\sqrt{3}$

5) $\sqrt{80}$

    $4\sqrt{5}$

6) $\sqrt{192}$

    $8\sqrt{3}$

7) $\dfrac{9\sqrt{8}}{\sqrt{7}}$ $\dfrac{18\sqrt{14}}{7}$

8) $\dfrac{9\sqrt{4}}{5\sqrt{7}}$ $\dfrac{18\sqrt{7}}{35}$

9) $\dfrac{3\sqrt{8}}{2\sqrt{7}}$ $\dfrac{3\sqrt{14}}{7}$

10) $\dfrac{5\sqrt{4}}{\sqrt{10}}$

    $\sqrt{10}$

Geometry

Name_____

M. Pythagorean Theorem

Date_____ Hour____

Find the missing side of each triangle. Leave your answers in simplest radical form.

1)

9 cm

x

12 cm

$3\sqrt{7}$ cm

2)

9 in

$5\sqrt{2}$ in

x

$\sqrt{131}$ in

3)

4 cm

6 cm

x

$2\sqrt{13}$ cm

4)

x

3 in

4 in

$\sqrt{7}$ in

5)

x

6 m

9 m

$3\sqrt{5}$ m

6)

x

4 km

4 km

$4\sqrt{2}$ km