

SHOW ALL WORK FOR FULL CREDIT!!! INCLUDE ALL LABELS WHERE NEEDED!!!

Geometry EXAM REVIEW  
(UNIT 4: Parallel Lines)

Name Key hr     

Multiple Choice. Choose the best answer.

- D 1. Given the equations for lines  $c$ ,  $d$ , and  $e$ , which of the statements is true?

Line  $c$ :  $y = 5x + 1$     Line  $d$ :  $y = -\frac{1}{5}x + 4$     Line  $e$ :  $y = 5x - 4$

- a.  $c \perp d$
- b.  $c \parallel e$
- c.  $d \perp e$
- d. all of the above

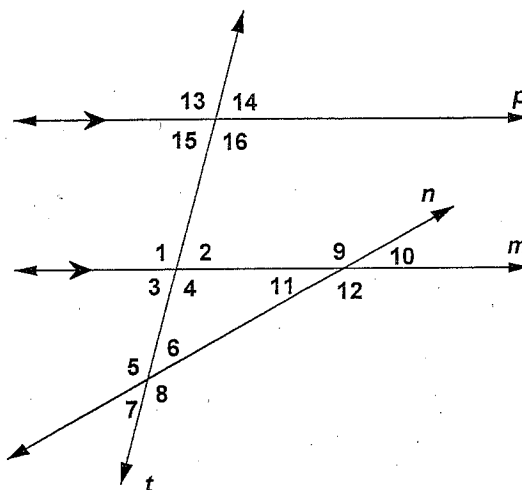
- A 2. If a line has a slope of 6, then the slope of the line parallel to it is

- a. 6
- b. -6
- c.  $1/6$
- d.  $-1/6$

Use the diagram to help you choose the best answer.

- D 3.  $\angle 15$  and  $\angle 1$  are called \_\_\_\_ angles.

- a. alternate interior
- b. alternate exterior
- c. corresponding
- d. same-side interior



- A 4.  $\angle 11$  and  $\angle 8$  are called \_\_\_\_ angles.

- a. alternate interior
- b. alternate exterior
- c. corresponding
- d. same-side interior

- C 5.  $\angle 7$  and  $\angle 3$  are called \_\_\_\_ angles.

- a. alternate interior
- b. alternate exterior
- c. corresponding
- d. same-side interior

- A 7. Which statement is true?

- a.  $p \parallel m$
- b. If  $m\angle 3 = 75^\circ$ , then  $m\angle 16 = 75^\circ$ .
- c.  $m\angle 4 + m\angle 11 = 180^\circ$
- d.  $p$  is a transversal to  $m$  and  $t$ .

- B 6.  $\angle 9$  and  $\angle 7$  are called \_\_\_\_ angles.

- a. alternate interior
- b. alternate exterior
- c. corresponding
- d. same-side interior

- D 8.  $\angle 12$  and  $\angle 8$  are same-side interior angles for

- a.  $p$  &  $t$
- b.  $m$  &  $n$
- c.  $n$  &  $t$
- d.  $m$  &  $t$

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9. Use the diagram on the right to answer a through f.

a.  $m\angle 2 = 70^\circ$ ,  $m\angle 6 = 70^\circ$

b.  $m\angle 4 = 65^\circ$ ,  $m\angle 8 = 65^\circ$

c.  $m\angle 7 = 110^\circ$ ,  $m\angle 6 = 70^\circ$

d.  $m\angle 1 + m\angle 5 = 212^\circ$ ,  $m\angle 5 = 106^\circ$

e.  $\angle 2 = 9x + 1$ ,  $\angle 4 = 7x + 11$

$x = 5$

$m\angle 2 = 46^\circ$

$9x + 1 = 7x + 11$

$2x + 1 = 11$

$2x = 10$

$x = 5$

$9(5) + 1$

$45 + 1$

$46$

f.  $\angle 3 = 7x + 3$ ,  $\angle 2 = 3x + 7$

$x = 17$

$m\angle 4 = 58^\circ$

$7x + 3 + 3x + 7 = 180^\circ$

$10x + 10 = 180^\circ$

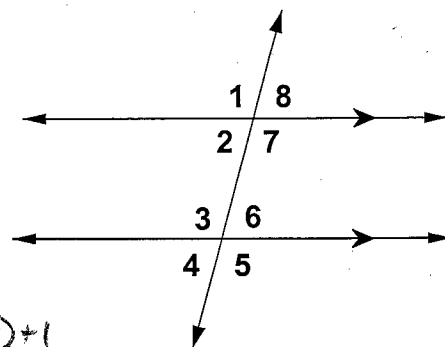
$10x = 170$

$x = 17$

$x = 17$

$m\angle 4 = 3(17) + 7$

$= 58$



Write an equation for a line in slope-intercept form using the given information.

10.  $m = \frac{4}{3}$ ,  $(3, -1)$

$y - y_1 = m(x - x_1)$

$y - (-1) = \frac{4}{3}(x - 3)$

$y + 1 = \frac{4}{3}(x - 3)$

$y + 1 = \frac{4}{3}x - 4$

$y = \frac{4}{3}x - 5$

11.  $(6, -2)$  and  $(4, -8)$

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$m = \frac{-8 - (-2)}{4 - 6} = \frac{-6}{-2} = 3$

$y - y_1 = m(x - x_1)$

$y - (-2) = 3(x - 6)$

$y + 2 = 3(x - 6)$

$y + 2 = 3x - 18$

$y = 3x - 20$

12. perpendicular to  $y = -\frac{2}{5}x + 2$  and through  $(6, 3)$

$\rightarrow$  opp. recip slope  $-\frac{2}{5} \rightarrow \frac{5}{2}$

$y - y_1 = m(x - x_1)$

$y - 3 = \frac{5}{2}(x - 6)$

$y - 3 = \frac{5}{2}x - 15$

$y = \frac{5}{2}x - 12$

13. parallel to  $y = 3x - 3$  and through  $(-1, 4)$

$\rightarrow$  same slope  $m = 3$

$y - y_1 = m(x - x_1)$

$y - 4 = 3(x - (-1))$

$y - 4 = 3(x + 1)$

$y - 4 = 3x + 3$

$y = 3x + 7$