

## MATH COMPETENCY FOR PRINCIPLES OF ECONOMICS

Name \_\_\_\_\_, \_\_\_\_\_  
(Last) (First)

- 1) 10% of 18 is
  - a) 90
  - b) 18
  - c) 1800
  - d) 1.8
  - e) 0.18
- 2) 40 is what percent of 200
  - a) 25%
  - b) 50%
  - c) 75%
  - d) 40%
  - e) 20%
- 3)  $\frac{2}{5}$  expressed as a decimal is
  - a) 1.0
  - b) 0.2
  - c) 0.4
  - d) 2.5
  - e) 0.25
- 4)  $\frac{1}{(1-0.8)}$  is equal to
  - a) 1.25
  - b) -1.25
  - c) 0.5
  - d) -5
  - e) 5
- 5)  $(\frac{1}{2})(\frac{3}{4})$  is equal to
  - a)  $\frac{8}{3}$
  - b)  $\frac{3}{8}$
  - c)  $\frac{1}{8}$
  - d)  $\frac{2}{3}$
  - e)  $\frac{3}{2}$
- 6)  $(\frac{2}{3}) > (\frac{3}{4})$ 
  - a) true
  - b) false
- 7) If  $X=4$ , and  $Y = 6$ ; the arithmetic (simple) average of  $X$  and  $Y$  is
  - a) 4
  - b) 5
  - c) 6
  - d) 10
  - e) 0
- 8) Given:  $Y = 2X$ , when  $X=3$  then  $Y$  is equal to
  - a) 5
  - b) 3
  - c) 6
  - d)  $\frac{2}{3}$
  - e)  $\frac{3}{2}$
- 9) If  $X > Y$ , then  $-X < -Y$ 
  - a) True
  - b) False
- 10) If  $X > Y$ , then  $(\frac{1}{X}) > (\frac{1}{Y})$ 
  - a) True
  - b) False
- 11) Given:  $Y = 24 - 6X$ , when  $X=4$  then  $Y$  is equal to
  - a) 48
  - b) 20.4
  - c) 24
  - d) 30
  - e) 0
- 12) If the price of a good ( $P$ ) were \$10 on 1 Jan 1999 and on 1 Jan 2000 the price was \$12, the percentage change in price was
  - a) 20%
  - b) -20%
  - c) +2%
  - d) -2%
  - e) +10%
- 13) An inverse relationship between  $X$  and  $Y$  exists when as  $X$  increases,  $Y$ 
  - a) Decreases
  - b) Increases
  - c) Is unchanged

14) The equation,  $Y = 11$  is represented by line \_\_\_\_ in Figure 1.

- a) a
- b) b
- c) c
- d) d

15) In Figure 1, the line that represents the equation,  $Y = 16 - 2X$ , is

- a) a
- b) b
- c) c
- d) d

16) Given the equation,  $Y = 16 - 2x$ , when  $X = 4$ ,  $Y =$

- a) 12
- b) 10
- c) 8
- d) 6
- e) 16

17) Given the equation,  $Y = 16 - 2X$ , the slope of the function is

- a) 16
- b) -8
- c) -4
- d) -2
- e) 2

18) Given the equation,  $Y = 10 - .5X$ , a one unit decrease in  $X$  will

- a) Leave  $Y$  unchanged
- b) Increase  $Y$  by 5 units
- c) Decrease  $Y$  by 5 units
- d) Increase  $Y$  by  $\frac{1}{2}$  unit
- e) Decrease  $Y$  by  $\frac{1}{2}$  unit

19) In Figure 1 a positive relationship between  $X$  and  $Y$  is shown by line

- a) a
- b) b
- c) c
- d) d

20) Which line(s) suggest a negative relationship between  $X$  and  $Y$ ?

- a) a
- b) b
- c) c
- d) d

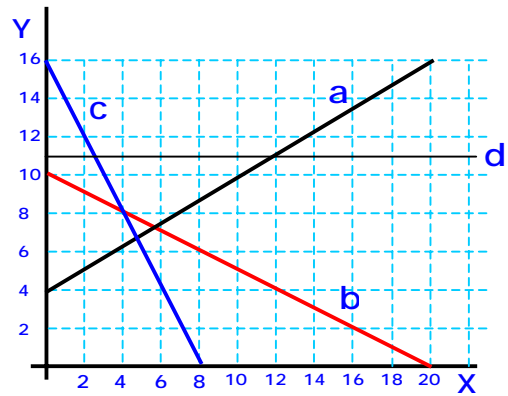


Figure 1

21) Which line in Figure 1 has a slope of 0?

- a) a
- b) b
- c) c
- d) d

22) In Figure 1, the  $Y$  intercept of line B is

- a) 16
- b) 8
- c) 10
- d) 11
- e) 4