

**Use the following information to answer questions 1 and 2.**

Line AB is parallel to CD and passes through the points A(1,2) and B(4,4). If line CD passes through point D(3,7);

1. Find the slope of line AB

2. Find the equation of line CD

**Use the following information to answer questions 3 - 5.**

Two perpendicular lines ST and SV intersect at a point S(3,4). Line ST passes through point T(5,5).

3. Find the slope of line ST.

4. Find the slope of the line SV

5. Find the equation of the line SV

**Use this information to answer questions 6 - 7.**

A-Line defined by  $y = 3x + 4$  is perpendicular to line DF. If the coordinates of D is (2,4)

6. Find the slope of the line DF

7. Find the equation of the line DF

**Use the rectangle to answer questions 8 – 13.**

DEFG is a rectangle. Two vertices of the rectangle are  $D(4,3)$  and  $E(7,1)$

8. Find the slope of side DE

9. What is the slope of the side GF?

10. Find the slope of the side EF

11. Find the equation of side EF

12. What is the slope of side DG?

13. If a line is drawn such that it coincides with the side DG, what will be the equation of that line?

Use this information to answer questions 14 - 16

Lines TU and UV intersect perpendicularly at a point  $U(-31,9)$ . If the coordinates of T is  $(-11,21)$ .

14. Find the slope of the line TU

15. What is the slope of the line UV?

16. Find the equation of the line UV

Use the following information to answer question 17-19.

Line PR is parallel to line ST and passes through points  $P(5,0)$  and  $R(2,9)$ . Line ST passes through a point  $S(2,3)$ .

17. Find the slope of the line PR

18. What is the slope of the line ST?

19. Find the equation of the line ST.

20. Two perpendicular lines  $L_1$  and  $L_2$  intersect at a point  $A(-11, -4)$ .  $L_1$  passes through a point  $B(3,5)$ . Find the equation of  $L_2$

## Answer Keys

Day 28:

1.  $\frac{2}{3}$

2.  $y = \frac{2}{3}x + 5$

3.  $\frac{1}{2}$

4. -2

5.  $y = -2x + 10$

6.  $-\frac{1}{3}$

7.  $y = -\frac{1}{3}x + \frac{14}{3}$

8.  $-\frac{2}{3}$

9.  $-\frac{2}{3}$

10.  $\frac{3}{2}$

11.  $y = \frac{3}{2}x - \frac{19}{2}$

12.  $\frac{3}{2}$

13.  $y = \frac{3}{2}x - 3$

14.  $\frac{4}{5}$

15.  $-\frac{5}{4}$

16.  $y = -\frac{5}{4}x - \frac{119}{4}$

17. -3

18. -3

19.  $y = -3x + 9$

20.  $y = -\frac{14}{9}x - \frac{190}{9}$