1. Find the Component form of the vector **v**.
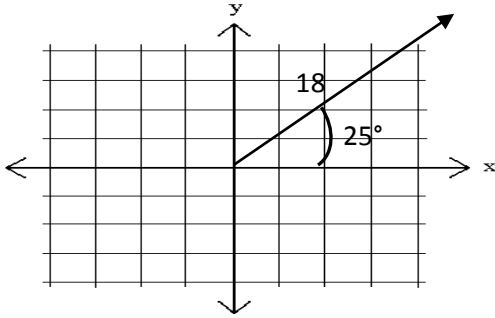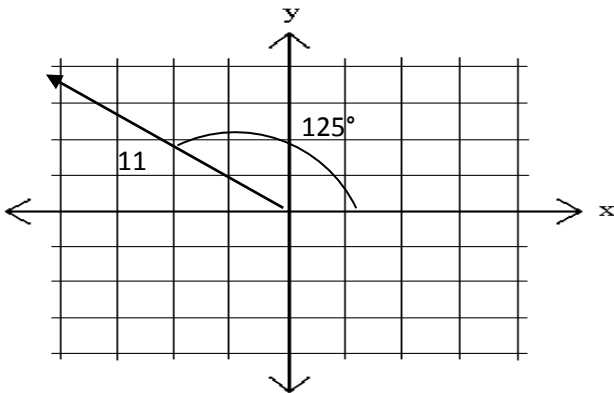

2. If R = (-2, 5) & S = (2,-8), find the component form of $\overrightarrow{RS}$

3. If R = (-2, 5) & S = (2,-8), Find the magnitude of $\overrightarrow{RS}$

4. If $u=\langle-1,3\rangle$ & $v=\langle2,4\rangle$, find -2**u**-3**v**

5. Find the unit vector in the direction of **W**= -i - 2j

6. Find the unit vector in the direction of **u** = $\langle-4,-5\rangle$

7. Find the magnitude of $\langle-1,2\rangle$

8. Find the Partial Fraction Decomposition for the expression: $\dfrac{3x^3+6x-1}{\left(x^2+2\right)^2}$

9. Find the direction angle of $\langle-1,2\rangle$

10. Find the Component form of the vector **v**.

11. If R = (2, -3) & S = (-5,4), find the component form of $\overrightarrow{RS}$

12. If R = (2, -3) & S = (-5,4), Find the magnitude of $\overrightarrow{RS}$

13. If $u=\langle1,-2\rangle$ & $v=\langle-1,3\rangle$, find 3**u**-2**v**

14. Find the unit vector in the direction of **w** = 2i - 3j

15. Find the unit vector in the direction of **u**= $\langle7,24\rangle$

16. Find the magnitude of $\langle4,-9\rangle$

17. Find the Partial Fraction Decomposition for the expression: $\dfrac{4x-11}{2x^2-x-3}$

18. Find the direction angle of $\langle4,-9\rangle$

ANSWERS:

1. $\langle 16.3, 7.6 \rangle$

2. $\langle 4, -13 \rangle$

3. $\sqrt{185}$

4. $\langle -4, -18 \rangle$

5. $-0.45i - 0.89j$

6. $\langle \frac{-4}{\sqrt{41}}, \frac{-5}{\sqrt{41}} \rangle$

7. $\sqrt{5}$

8. $\dfrac{3x}{x^2+2} + \dfrac{-1}{\left(x^2+2\right)^2}$

9. $117°$

10. $\langle -6.3, 9.0 \rangle$

11. $\langle -7, 7 \rangle$

12. $7\sqrt{2}$

13. $\langle 5, -12 \rangle$

14. $0.55i - 0.83j$

15. $\langle \frac{7}{25}, \frac{24}{25} \rangle$

16. $\sqrt{97}$

17. $\dfrac{3}{x+1} - \dfrac{2}{2x-3}$

18. $294°$