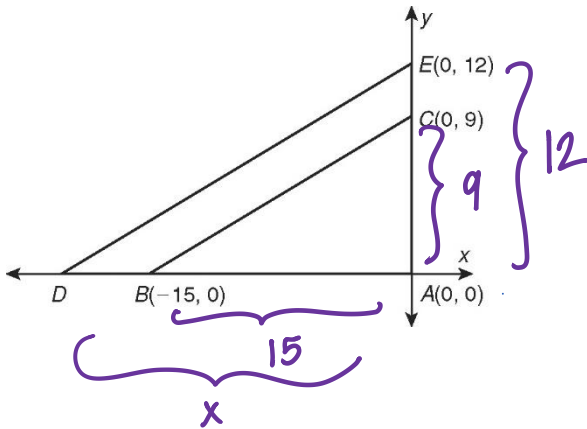


Key

7.6 SIMILARITY IN THE COORDINATE PLANE

1. Given that $\triangle ABC \sim \triangle ADE$, find the scale factor and the coordinates of D .

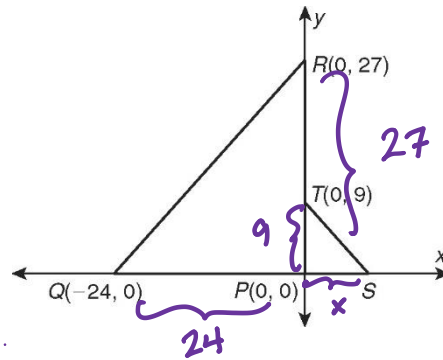


$$\frac{9}{12} = \frac{15}{x} \quad 9x = 180$$

$$x = 20$$

$$D: (-20, 0) \quad \text{scale factor} = \frac{9}{12} = \frac{3}{4}$$

2. Given that $\triangle PQR \sim \triangle PST$, find the scale factor and the coordinates of S .



$$\frac{9}{27} = \frac{x}{24}$$

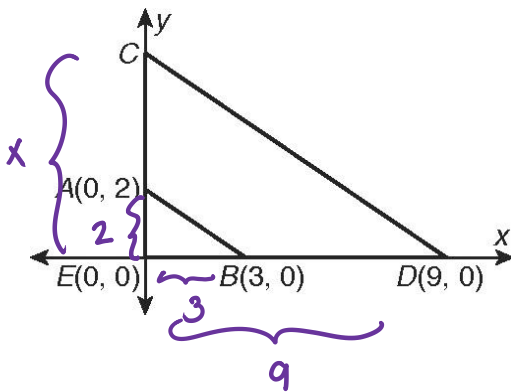
$$\frac{216}{27} = \frac{27x}{27}$$

$$x = 8$$

$$S = (8, 0)$$

$$\text{scale factor} = \frac{9}{27} = \frac{1}{3}$$

3. Given that $\triangle AEB \sim \triangle CED$, find the coordinates of C and the scale factor.

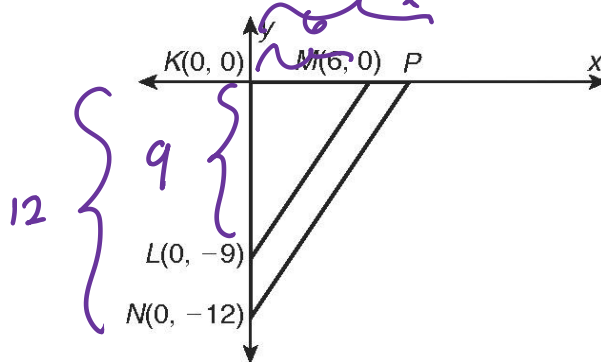


$$\frac{3}{9} = \frac{2}{x} \quad 3x = 18 \quad C = (0, 6)$$

$$x = 6$$

$$\text{scale factor: } \frac{3}{9} = \frac{1}{3}$$

4. Given that $\triangle LKM \sim \triangle NKP$, find the coordinates of P and the scale factor.



$$\frac{9}{12} = \frac{6}{x}$$

$$P = (8, 0)$$

$$\frac{9x}{9} = \frac{72}{9}$$

$$\text{scale factor:}$$

$$\frac{9}{12} = \frac{3}{4}$$

$$x = 8$$