Name:

Date:

School:

Facilitator:

2.02 Segment Addition and Distance

Total Points: 41

**Use the number line to find the distance of the line segment. You may use the absolute value of the difference or count the steps.**



**Find**

1. DE 2. DF 3. EG

Answer:       Answer:       Answer:

*Use the segment addition to find the distance of the given line segment.*



35

5

5

**Find**

4. AC 5. AD 6. BD

Answer:       Answer:       Answer:

**Find the distance between the two points to the nearest hundredths place:**

7. (1, 3), (-2, 4)

$$d=\sqrt{\left(x\_{2}-x\_{1}\right)^{2}+\left(y\_{2}-y\_{1}\right)^{2}}$$

$d=\sqrt{\left(- \right)^{2}+\left(- \right)^{2}}$

$$d=\sqrt{\left(\right)^{2}+\left(\right)^{2}}$$

$$d=\sqrt{+ }$$

$$d=\sqrt{}$$

$d=$

Answer:

8. (-1,0), (2,-4)

$$d=\sqrt{\left(x\_{2}-x\_{1}\right)^{2}+\left(y\_{2}-y\_{1}\right)^{2}}$$

$$d=\sqrt{\left(- \right)^{2}+\left(- \right)^{2}}$$

$$d=\sqrt{\left(\right)^{2}+\left(\right)^{2}}$$

$$d=\sqrt{+ }$$

$$d=\sqrt{}$$

$d=$

Answer:

**Find the distance between the two points. Write the final answer in simplified form.**

9. (-2,2), (-6,-8)

$$d=\sqrt{\left(x\_{2}-x\_{1}\right)^{2}+\left(y\_{2}-y\_{1}\right)^{2}}$$

$$d=\sqrt{\left(- \right)^{2}+\left(- \right)^{2}}$$

$$d=\sqrt{\left(\right)^{2}+\left(\right)^{2}}$$

$$d=\sqrt{+ }$$

$$d=\sqrt{}$$

$$d=\sqrt{}\sqrt{}$$

$d=$ $\sqrt{}$

Answer:

10. In your own words, explain how to use the Pythagorean Theorem derive the distance formula.