

1-3 Distance and Midpoint Skills Practice

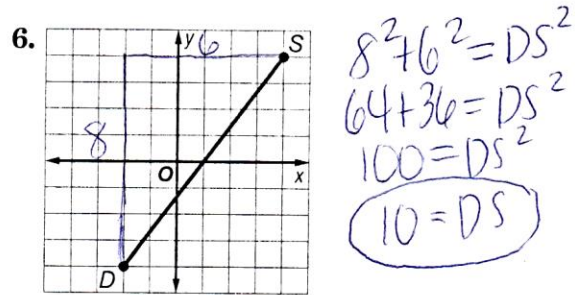
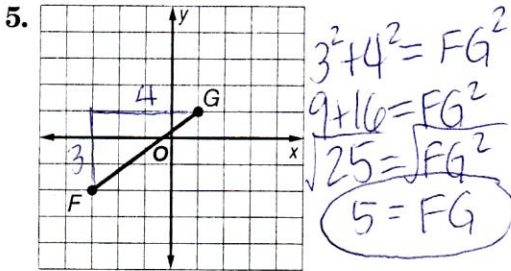
Name Master G
 Date _____ Block _____

Use the number line to find each measure.



1. LN $9 - 3 = 6$ 2. JL $3 - (-5) = 8$
 3. KN $9 - (-2) = 11$ 4. MN $9 - 6 = 3$

Find the distance between each pair of points.



7. $K(2, 3), F(4, 4)$

$KF = \sqrt{2^2 + 1^2} = \sqrt{4 + 1} = \sqrt{5}$

8. $C(-3, -1), Q(-2, 3)$

$CQ = \sqrt{1^2 + 4^2} = \sqrt{1 + 16} = \sqrt{17}$

9. $Y(2, 0), P(2, 6)$

$YP = \sqrt{0^2 + 6^2} = \sqrt{6^2} = 6$

10. $W(-2, 2), R(5, 2)$

$WR = \sqrt{7^2 + 0^2} = \sqrt{7^2} = 7$

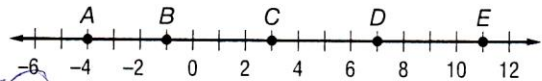
11. $A(-7, -3), B(5, 2)$

$AB = \sqrt{12^2 + 5^2} = \sqrt{144 + 25} = \sqrt{169} = 13$

12. $C(-3, 1), Q(2, 6)$

$CQ = \sqrt{5^2 + 5^2} = \sqrt{25 + 25} = \sqrt{50} = \sqrt{25} \cdot \sqrt{2} = 5\sqrt{2}$

Use the number line to find the coordinate of the midpoint of each segment.



13. \overline{DE} $\frac{7+11}{2} = \frac{18}{2} = 9$

14. \overline{BC} $\frac{-1+3}{2} = \frac{2}{2} = 1$

15. \overline{BD} $\frac{-1+7}{2} = \frac{6}{2} = 3$

16. \overline{AD} $\frac{-4+7}{2} = \frac{3}{2} = 1.5$

Find the coordinates of the midpoint of a segment with the given endpoints.

17. $T(3, 1), U(5, 3)$

$(\frac{3+5}{2}, \frac{1+3}{2}) = (4, 2)$

18. $J(-4, 2), F(5, -2)$

$(\frac{-4+5}{2}, \frac{2+(-2)}{2}) = (\frac{1}{2}, 0)$

Find the coordinates of the missing endpoint if P is the midpoint of \overline{NQ} .

19. $N(2, 0), P(5, 2)$ (x, y)

$\frac{2+x}{2} = 5$ $\frac{0+y}{2} = 2$
 $2+x = 10$ $y = 4$
 $x = 8$ $(8, 4)$

20. $N(5, 4), P(6, 3)$

$\frac{5+x}{2} = 6$ $\frac{4+y}{2} = 3$
 $5+x = 12$ $4+y = 6$
 $x = 7$ $y = 2$
 $(7, 2)$

21. $Q(3, 9), P(-1, 5)$

$\frac{3+x}{2} = -1$ $\frac{9+y}{2} = 5$
 $3+x = -2$ $9+y = 10$
 $x = -5$ $y = 1$
 $(-5, 1)$