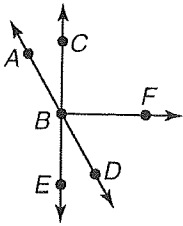# Midterm Practice Problems Day 2 2014-2015

Multiple Choice
Identify the choice that best completes the statement or answers the question.

_____ 1. Find the distance between $P(2, 8)$ and $Q(5, 3)$.
  a. 9
  b. $\sqrt{18}$
  c. $\sqrt{34}$
  d. $\sqrt{170}$

_____ 2. Find the coordinates of the midpoint of $\overline{LB}$ if $L(8, 5)$ and $B(-6, 2)$.
  a. $\left(1, 3\frac{1}{2}\right)$
  b. $\left(2, 1\frac{1}{2}\right)$
  c. $\left(7, 3\frac{1}{2}\right)$
  d. $\left(7, 1\frac{1}{2}\right)$

Use the figure below.

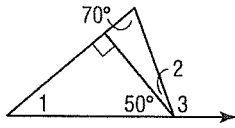_____ 3. Which angle is a vertical angle to $\angle ABE$?
  a. $\angle DBE$
  b. $\angle CBD$
  c. $\angle ABC$
  d. $\angle EBA$

_____ 4. What is the length of the sides of this equilateral triangle?
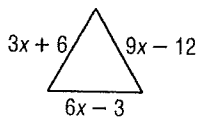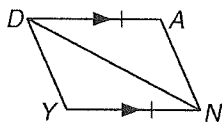

  a. 42
  b. 30
  c. 15
  d. 12

Use the figure.

_____ 5. What is $m\angle 1$?
  a. 40
  b. 50
  c. 70
  d. 90

_____ 6. What is $m\angle 3$?
  a. 40
  b. 70
  c. 90
  d. 110

Use the proof.
Given: $\overline{DA} \parallel \overline{YN}; \overline{DA} \cong \overline{YN}$
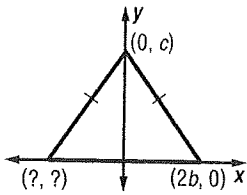**Prove:** $\angle NDY \cong \angle DNA$

Statements	Reasons
1. $\overline{DA} \parallel \overline{YN}$	1. Given
2. $\angle ADN \cong \angle YND$	2. Alt. int. $\angle s$ are $\cong$.
3. $\overline{DA} \cong \overline{YN}$	3. Given
4. $\overline{DN} \cong \overline{DN}$	4. Reflexive Property
5. $\triangle NDY \cong \triangle DNA$	5. _____
6. $\angle NDY \cong \angle DNA$	6. _____

_____ 7. What is the reason for statement 5?
  a. ASA
  b. AAS
  c. SAS
  d. SSS

_____ 8. What is the reason for statement 6?
  a. Alt. int. $\angle s$ are $\cong$.
  b. CPCTC
  c. Corr. angles are $\cong$.
  d. Isosceles Triangle Theorem

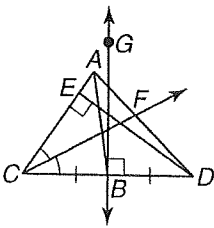_____ 9. What are the missing coordinates of the triangle?

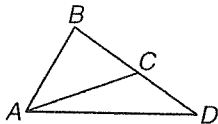

a. $(-2b, 0)$
b. $(0, 2b)$

c. $(-c, 0)$
d. $(0, -c)$

Refer to the figure below.

_____ 10. Name a median.

a. $\overline{DE}$
b. $\overline{AB}$

c. $\overleftrightarrow{GB}$
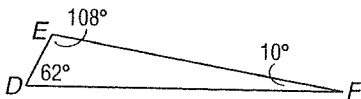d. $\overrightarrow{CF}$

Refer to the figure to determine which is a true statement for the given information.
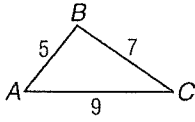

_____ 11. $\overline{AC}$ is a median.

a. $m\angle ACD = 90$
b. $\angle BAC \cong \angle DAC$

c. $BC = CD$
d. $\angle B \cong \angle D$
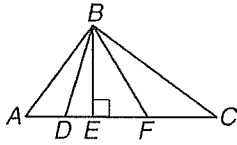
_____ 12. Name the longest side of $\triangle DEF$.

a. $\overline{DE}$
b. $\overline{EF}$

c. $\overline{DF}$
d. cannot tell

_____ 13. Which angle in $\triangle ABC$ has the greatest measure?

a. $\angle A$ c. $\angle C$
b. $\angle B$ d. cannot tell

_____ 14. Find the shortest distance from B to $\overline{AC}$.

a. BD c. BF
b. BC d. BE

_____ 15. Parallelogram $ABCD$ has vertices $A(8, 2)$, $B(6, -4)$, and $C(-5, -4)$. Find the coordinates of D.
a. $D(-5, 2)$ c. $D(-2, 2)$
b. $D(-3, 2)$ d. $D(-4, 8)$

_____ 16. $ABCD$ is a rectangle with $B(-4, 6)$, $C(-4, 2)$, and $D(10, 2)$. Find the coordinates of A.
a. $A(6, 4)$ c. $A(2, 6)$
b. $A(10, 4)$ d. $A(10, 6)$

_____ 17. The diagonals of square $ABCD$ intersect at E. If $AE = 2x + 6$ and $BD = 6x - 10$, find AC.
a. 11   c. 56
b. 28   d. 90

_____ 18. For isosceles trapezoid $MNOP$, find $m\angle MNP$.
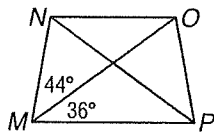
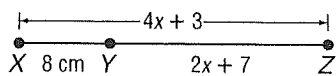a. 44   c. 80
b. 64   d. 116

_____ 19. Given $A(3, -7)$, under which reflection is $A'(3, 7)$?
a. reflection in the x-axis   c. reflection in the origin
b. reflection in the y-axis   d. reflection in the line $y = x$

_____ 20. What is the image of $X(3, 5)$ under the translation $(x, y) \rightarrow (x - 4, y + 6)$?
a. $X'(7, -1)$ c. $X'(7, 11)$
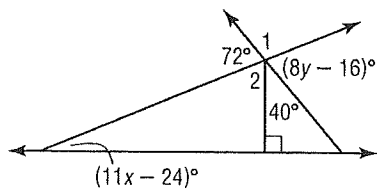b. $X'(-1, -1)$ d. $X'(-1, 11)$

Short Answer

21. Find the length of $\overline{XZ}$.

Use the figure below.

22. Find y.

23. Find $m\angle 1$.

24. Find $m\angle 2$.

25. Find x.

Midterm Practice Problems Day 2 2014-2015
Answer Section

MULTIPLE CHOICE

1. C
2. A
3. B
4. C
5. A
6. D
7. C
8. B
9. A
10. B
11. C
12. C
13. B
14. D
15. B
16. D
17. C
18. B
19. A
20. D

SHORT ANSWER

21. 27 cm
22. 11
23. 108
24. 68
25. 4.18