Bench Mark 2 Review Geometry

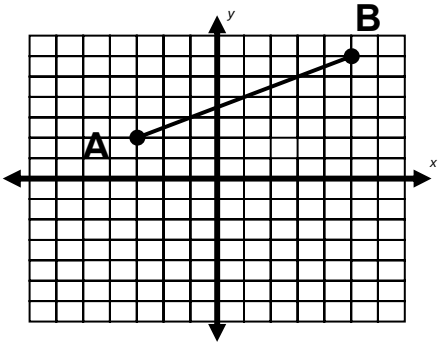
[G17.0] **1.** Which of the following is the slope of the line passing through the points (-3, 5) and (1, -1)?

A. $\frac{-2}{3}$

B. $\frac{-3}{2}$

C. $\frac{2}{3}$

D. $\frac{3}{2}$



[G17.0] **2. Using the graph above. What is the midpoint of points A and B?**

A. (4, 2)

B. (2, 6)

C. (1, 4)

D. (0, 3.5)

[G17.0] **3.** Using the graph above, what is the distance between the points A and B?

A. $\sqrt{90}$

B. $\sqrt{48}$

C. $\sqrt{80}$

D. 10

[G1.0] **4.** Which of the following is a parallel line to y = –4x – 5 through the point (2, 3)?

A. y = –4x + 11

B. y = –4x – 11

C. $y = \frac{1}{4}x + 3$

D. $y = \frac{1}{4}x - 3$

[G17] **5.** Which of the following is a perpendicular line to y = –2x – 7 through the point (–4, –5)?

A. y = –2x + 3

B. y = –2x – 3

C. $y = \frac{1}{2}x + 3$

D. $y = \frac{1}{2}x - 3$

[G17.0] **6.** If two lines are parallel, which of the following statements is **true**?

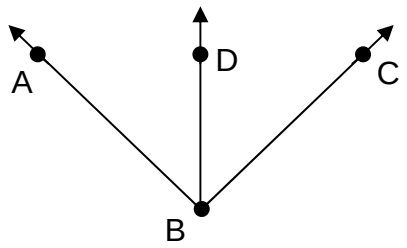
A. slope of l_1 = 1 / slope of l_2

B. (slope of l_1)(slope of l_2) = –1

C. (slope of l_1)(slope of l_2) = 1

D. slope of l_1 = slope of l_2

[G1.0] **7.** Solve for x:
In the figure (not drawn to scale),
$\overrightarrow{BD}$ **bisects** ∠ABC,
m∠ABD=2x+14, and M∠ABC=100°.



A. 7

B. 18

C. 10

D. 43

[G1.0] **8.** Consider the following statements:
∠2, ∠3 are supplementary.
∠3, ∠4 are supplementary.

What can you conclude?

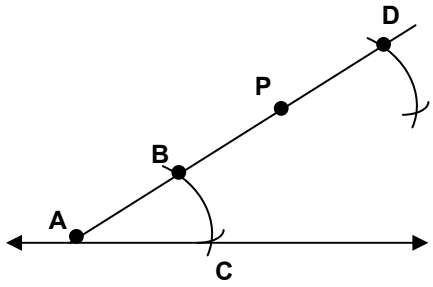
A. ∠2 and ∠4 are supplementary.

B. ∠3 is obtuse.

C. ∠2 and ∠4 are right angles.

D. ∠2 ≅ ∠4

[G16.0] **9.** The following drawing shows the initial steps of which construction?



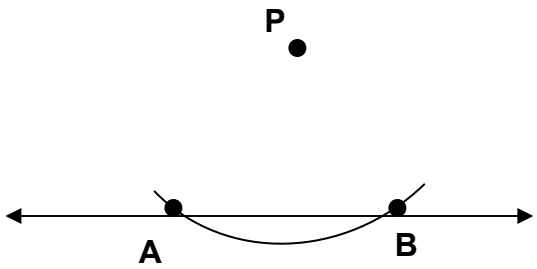
A. a line parallel to a given line through a given point

B. a line perpendicular to a given line through a given point

C. an angle bisector

D. another line through P congruent to the line.

[G16.0] **10.** The following drawing shows the initial steps of which construction?



A. a line parallel to a given line through a given point

B. a line perpendicular to a given line through a given point

C. an angle bisector

D. another line through P congruent to the line.

[G1.0] **11.** Let D be between A and B. Use the segment addition postulate to solve for x.

AD = x + 26

BD = 2x + 35

AB = 40

A. 3

B. -7

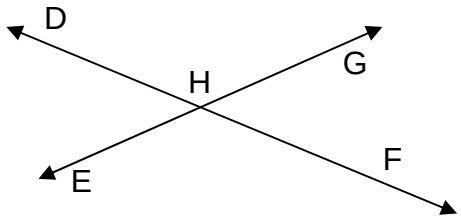
C. -3

D. 14

[G1.0] **12.** m∠GHF = 3x – 7,

m∠DHE = 53 – 2x.

Find **m∠GHF**.



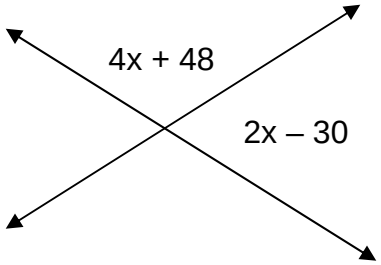
A. 134°

B. 12°

C. 61°

D. 29°

[G1.0] **13.** Solve for x.



A. 9

B. 75

C. 27

D. 3

[G1.0] **14.** Inferring a general truth by examining a number of specific examples is:

A. Law of Syllogism

B. Law of Detachment

C. Deductive Reasoning

D. Inductive Reasoning

[G1.0] **15.** Using logic to draw conclusions based on accepted statements is:

A. Law of Syllogism

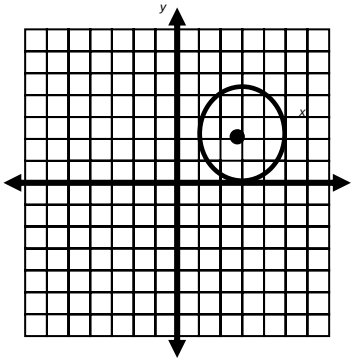
B. Law of Detachment

C. Deductive Reasoning

D. Inductive Reasoning

Please continue ☞

[G17.0] **16.** Given the graph below. What is the equation of the circle?



A. $(x + 3)^2 + (y + 2)^2 = 2$

B. $(x – 3)^2 + (y – 2)^2 = 2$

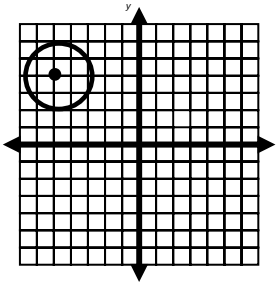
C. $(x + 3)^2 + (y + 2)^2 = 4$

D. $(x – 3)^2 + (y – 2)^2 = 4$

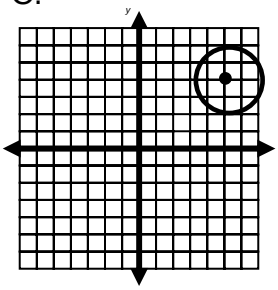
[G17.0] **17.** Which of the following graphs represents the circle with the equation

$(x + 5)^2 + (y – 4)^2 = 4$

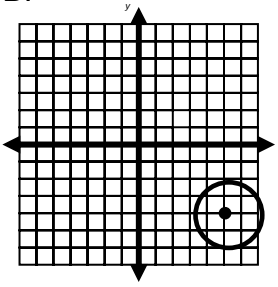
A.



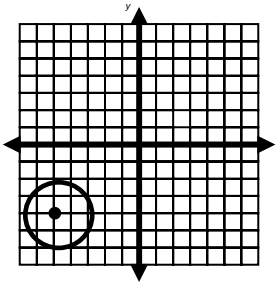
C.



B.



D.



[G22.0] **18.** The vertices of ΔABC are **A(–4, –5), B(–1, 6) and C(5, 0)**. If ΔABC is translated **3 units up and 2 units to the left**, what are the new coordinates of the vertices of ΔA'B'C'?

A. A'(–6, –2), B'(–3, 9), C'(3, 3)

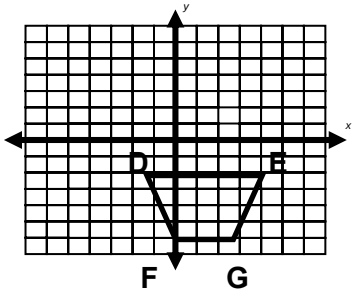
B. A'(–1, –7), B'(2, 4), C'(8, –2)

C. A'(–2, –2), B'(1, 9), C'(7, 3)

D. A'(–6, –8), B'(–3, 3), C'(2, –3)

[G22.0] **19.** Trapezoid DEFG is translated to D'E'F'G' using the following motion rule:

(x, y) → (x – 2, y + 3).



What are the coordinates of vertex **F'**?

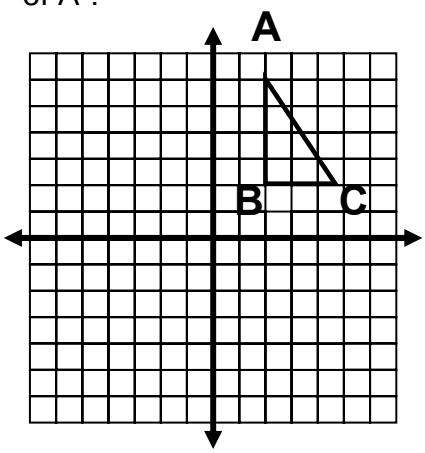
A. (–2, 9)

B. (2, –9)

C. (–2, –3)

D. None of the above

[G22.0] **20.** ΔABC is rotated 180° about the origin. What are the new coordinates of A'?



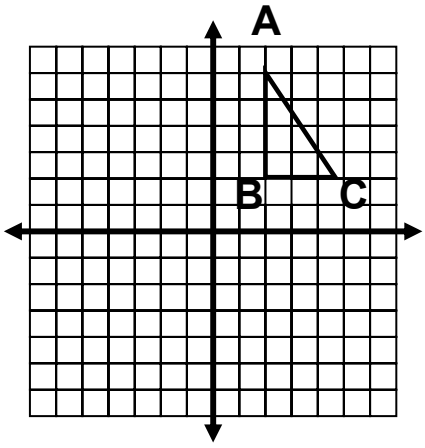
A. (–6, –2)

B. (–2, –6)

C. (–6, 2)

D. (2, –6)

[G22.0] **21.** ΔABC is reflected about the line **y = –2**. What are the new coordinates of C'?



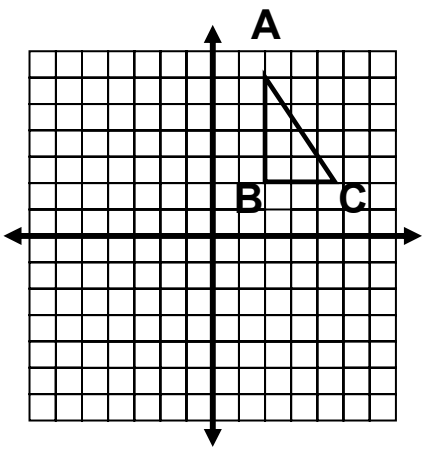
A. (5, –6)

B. (5, –2)

C. (–5, 2)

D. (–9, 2)

[G22.0] **22.** ΔABC is reflected about the **y-axis**. What are the new coordinates of C'?



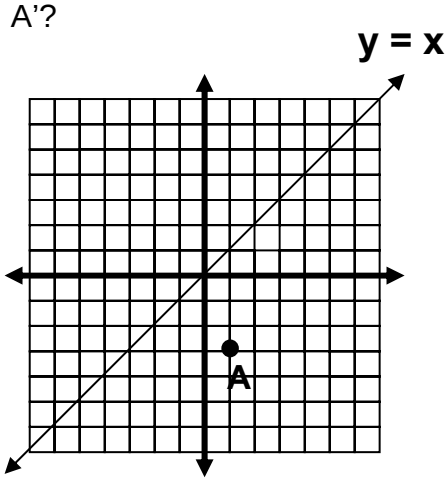
A. (5, –6)

B. (5, –2)

C. (–5, 2)

D. (–9, 2)

[G22.0] **23.** Point A is reflected about the line **y = x**. What are the new coordinates of A'?



A. (–1, –3)

B. (1, 5)

C. (–3, 1)

D. (–1, 3)

[G1.0] **24.** "**All geometric shapes in a plane are polygons.**"

Which of the following is a *counterexample* to the assertion above?

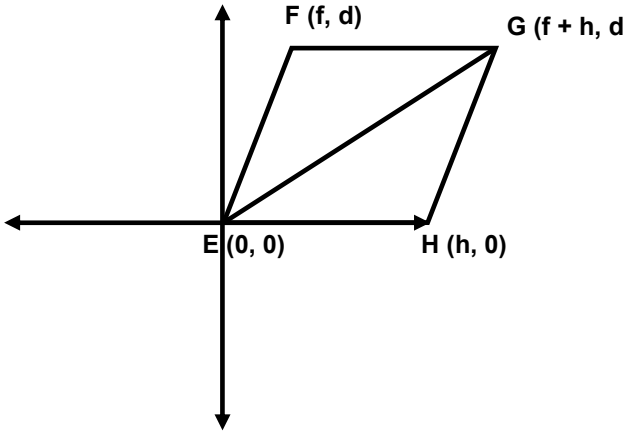
A. Quadrilateral

B. Trapezoid

C. Pentagon

D. Circle

[G17.0] **25.** Write the equation that best represents the **midpoint** of line segment EG.



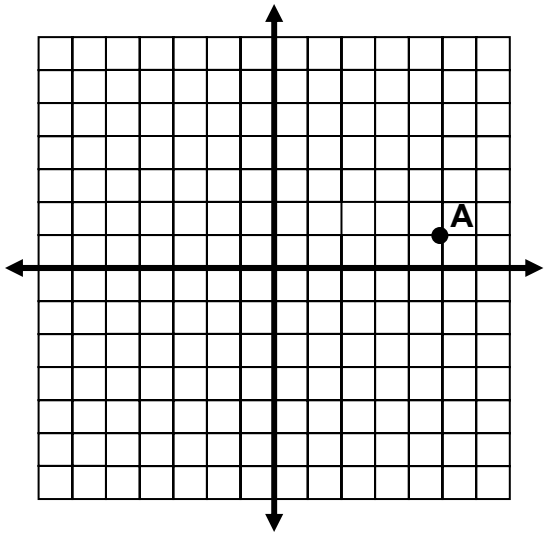
A. $\left(\frac{f}{2}, \frac{d}{2}\right)$

B. $\left(\frac{f+h}{2}, \frac{d}{2}\right)$

C. $\left(\frac{h}{2}, \frac{d}{2}\right)$

D. (f, d)

[G22.0] **26.** Given the point **A(5,1)**, find the coordinates of A' when:



26a.) A is reflected about the origin.

A' = (,)

26b.) A is rotated 180° about the origin.

A' = (,)

26c.) A is reflected about the line y = –x.

A' = (,)

26d.) A is reflected about the line y = x.

A' = (,)

26e.) Compare and contrast the four transformations above. How are the X and Y values similar and different for each one?

Geometry
Bench Mark 2 Review Answers

Question #	Answer	State standard
1.	B	17.0
2.	C	17.0
3.	C	17.0
4.	A	17.0
5.	D	17.0
6.	D	1.0
7.	B	1.0
8.	D	1.0
9.	A	16.0
10.	B	16.0
11.	B	1.0
12.	B	1.0
13.	C	1.0
14.	D	1.0
15.	C	1.0
16.	D	17.0
17.	A	17.0
18.	A	22.0
19.	C	22.0
20.	B	22.0
21.	A	22.0
22.	C	22.0
23.	C	22.0
24.	D	1.0
25.	B	17.0
26.	---	22.0