

Honors Math 2 Cumulative Review after Unit 4B Test

For exercises 1-4, A is between B and C and $AC = 5$.

1) If $AB = 4$, what is BC ?

2) If $BC = 6$, what is AB ?

3) If A is the midpoint of \overline{BC} , what is AB ?

4) If $AB = 2(AC)$, what is AB ?

For exercises 5-7, simplify completely.

5) $\frac{4ab^2c^{-1}}{(ab^{-2}c^3)^4}$

6) $\sqrt[3]{12x^4} \cdot \sqrt[3]{180x}$

7) $\frac{\sqrt{135x^4}}{\sqrt{20}}$

8) Which point lies in the solution set for the system: $2y - x \geq -6$

$2y - 3x < -6$

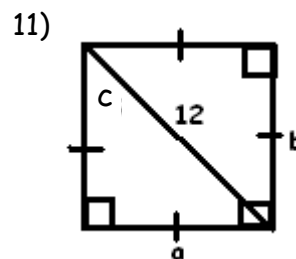
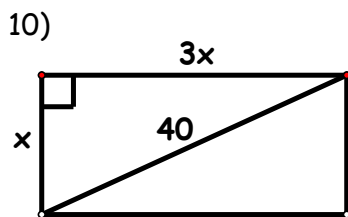
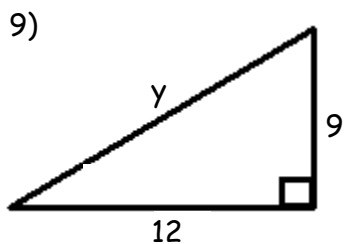
A. (-4, -1)

B. (3, 1)

C. (0, -3)

D. (4, 3)

Find the value of the variables. Give exact answers! (Hint: Pythagorean Theorem! ☺)



Solve.

12. $\frac{x}{x+24} = \frac{2}{x}$

13. $\frac{m}{m+9} = \frac{9}{m+9} + 2$

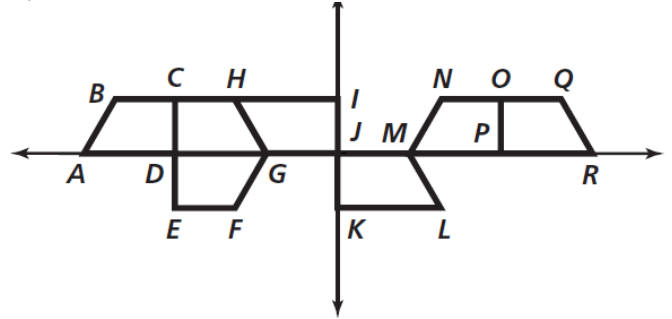
State whether each mapping is a reflection, rotation, translation, or glide reflection. **Specifically describe** each transformation. (Example: $\triangle MNOP \rightarrow \triangle RQOP$ is a reflection over the line OP .)

14. $\triangle ABCD \rightarrow \triangle GHCD$

15. $\triangle HGJI \rightarrow \triangle LMJK$

16. $\triangle GFED \rightarrow \triangle RQOP$

17. $\triangle MNOP \rightarrow \triangle ABCD$



Solve using the appropriate method. Give exact answer(s).

18) $-36 = 3m^2 - 31m$

19) $2x^2 - 6x - 2 = 0$

20) Solve $\sqrt{x + 14} = x - 16$

21) Which is the inverse of the function $f(x) = x - 5$?

A. $f^{-1}(x) = \frac{1}{x+5}$

B. $f^{-1}(x) = x + 5$

C. $f^{-1}(x) = 5 - x$

D. $f^{-1}(x) = \frac{1}{x-5}$

22) Find the discriminant to determine the number and nature of the roots. $2x^2 + 3x = 5$

A. Two real rational roots

B. One real rational root

C. Two imaginary roots

D. Two real irrational roots

23) In which direction is the graph of $f(x) = \frac{3}{x+b}$ translated when b increases?

A. down

B. up

C. right

D. left

24) Write the function so it would be easier to graph. Then, indicate how it's changed from the parent graph. $f(x) = \sqrt{4x - 28}$

25) In building a brick wall, the amount of time it takes to complete the wall varies directly with the number of bricks in the wall and varies inversely with the number of bricklayers that are working together. A wall containing 1200 bricks, using 3 bricklayers, takes 18 hours to build. How long would it take to build a wall of 4500 bricks if 5 bricklayers worked on it?