Pre-Final Practice

1) Drag the steps used to solve the problem to arrange them in the correct order.

$$9 \cdot 3 + 12 \div 2 - 7$$

Multiply.	**1)**	_Multiply_
Divide.	**2)**	_Divide_
Add.	**3)**	_Add_
Subtract.	**4)**	_Subtract_

2) Fill in the blanks using the available answer choices.

Which algebraic expression represents each verbal expression?

a. 5 minus the product of 8 and a number _____ $8n - 5$ _____
                                                            (Blank 1)

b. the quantity 8 minus n times 5 _____ $5(8-n)$ _____
                                                (Blank 2)

c. 5 decreased by the sum of 8 and n _____ $5 - (8 + n)$ _____
                                                    (Blank 3)

d. 5 less than 8 times a number _____ $8n - 5$ _____
                                            (Blank 4)

Blank 1 options	Blank 2 options	Blank 3 options	Blank 4 options
• 8n − 5	• 8n − 5	• 8n − 5	• 8n − 5
• 5 − 8n	• 5 − 8n	• 5 − 8n	• 5 − 8n
• 5(8 − n)	• 5(8 − n)	• 5(8 − n)	• 5(8 − n)
• 5 − (8 + n)	• 5 − (8 + n)	• 5 − (8 + n)	• 5 − (8 + n)

3) Which property can be used to show that if $16 + 43 = 10 + 49$ and $10 + 49 = 59$, then $16 + 43 = 59$?

○ Reflexive Property of Equality

○ Symmetric Property of Equality

☑ Transitive Property of Equality

○ Commutative Property of Equality

4) The equation $2d + 7 = 15$ is solved using the properties of equality.
Step 1: $2d + 7 = 15$
Step 2: $2d = 8$
Step 3: $d = 4$
Identify which property of equality is used to rewrite the equation from step 1 to step 2.

○ Addition Property of Equality because you must add 7 to the right side.

○ Addition Property of Equality because you must subtract 7 from each side.

☑ Subtraction Property of Equality because you must subtract 7 from each side.

○ Subtraction Property of Equality because you must add 7 to each side.

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_____

5) Solve $3(x - 5) - x = 2x + 15$.

- ○ 7.5
- ○ 15
- ✓ no solution
- ○ all real numbers

6) Solve $\frac{m}{15} = \frac{2}{5}$.

- ✓ 6
- ○ 12
- ○ 22
- ○ 30

7) Solve $2x + 18 = 6y$ for x.

- ○ $x = 3y - 18$
- ✓ $x = 3y - 9$
- ○ $x = 6y - 18$
- ○ $x = 9 - 6y$

8) Which is the domain and range of the relation shown in the graph?
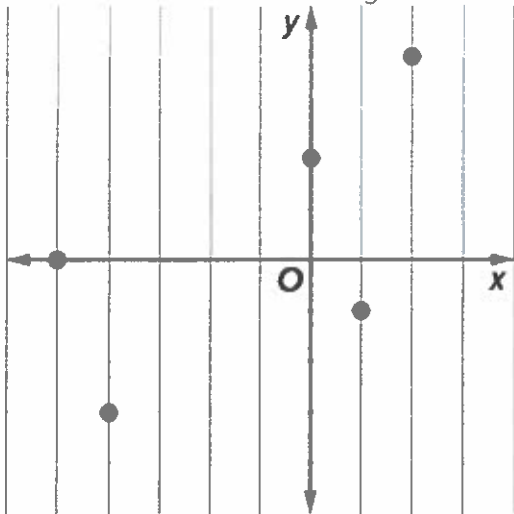
- ✓ $D : \{-5, -4, 0, 1, 2\}; R : \{-3, -1, 0, 2, 4\}$
- ○ $D : \{-5, -4, -3, -1\}; R : \{0, 1, 2, 4\}$
- ○ $D : \{5, 4, 0, 1, 2\}; R : \{0, 1, 2, 3, 4\}$
- ○ $D : \{-3, -1, 0, 2, 4\}; R : \{-5, -4, 0, 1, 2\}$

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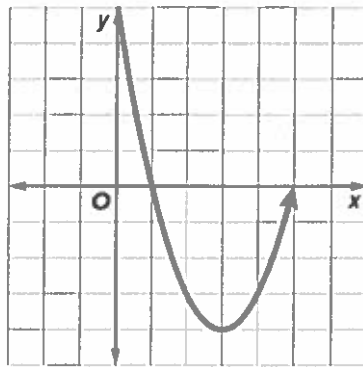**9)** For $f(x) = 3x - 5$, find the value of $f(-1) + 4$.

○ −8

☑ −4

○ 7

○ 4

10) Write $-2y = 5x - 6$ in standard form.

Skip

11) Fill in the blanks using the available answer choices.

DIVING Lisa dives into a pool from a diving board and then swims back to the surface. Her depth over time is represented by the function shown on the graph. The x-axis represents the surface of the water.

The function representing Lisa's dive is negative where x is between ____1____ and (Blank 1)

____5____.
(Blank 2)

Blank 1 options
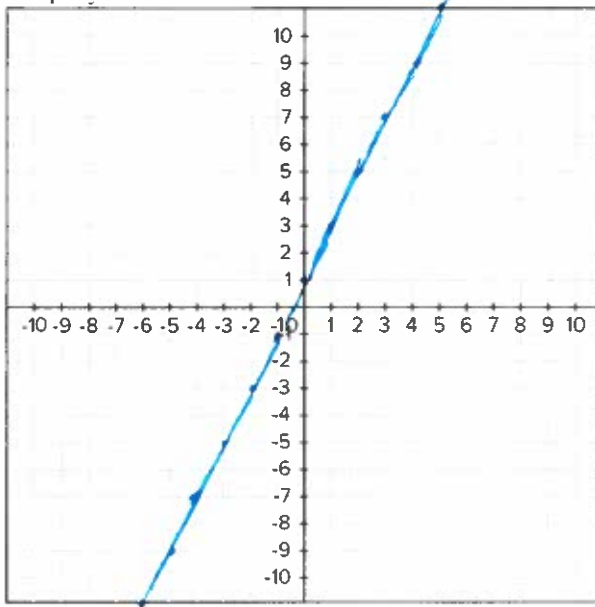- 1
- 3
- 4

Blank 2 options
- 2
- 3
- 5

12) GRADUATION In 2002, there were 164 seniors in the graduating class. In 2017, there were 185. What is the rate of change from 2002 to 2017?

○ $-\frac{7}{5}$

○ $\frac{3}{5}$

○ $\frac{5}{7}$

☑ $\frac{7}{5}$

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13) Graph $y = 2x + 1$.

14) Fill in the blanks using the available answer choices.

The table shows the relationship between x and y. Complete the statement.

x	y
0	$\overline{4}$
1	-1
2	2
3	5
4	8

The function that describes the relationship between x and y is ___*linear*___ because

each y-value is ___*3 more than*___ the value before it.

Blank 1 options
- linear
- not linear

Blank 2 options
- 3 more than
- 3 times

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15) Match the linear function with the correct description of how its graph differs from the parent graph.

$g(x) = -3(x)$ _Reflected over x-axis & stretched vert._
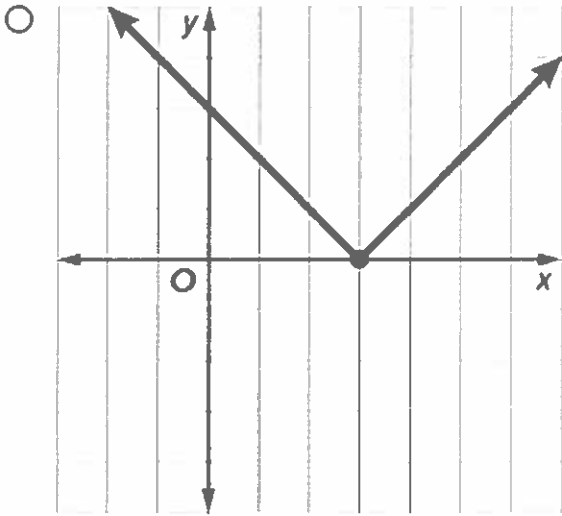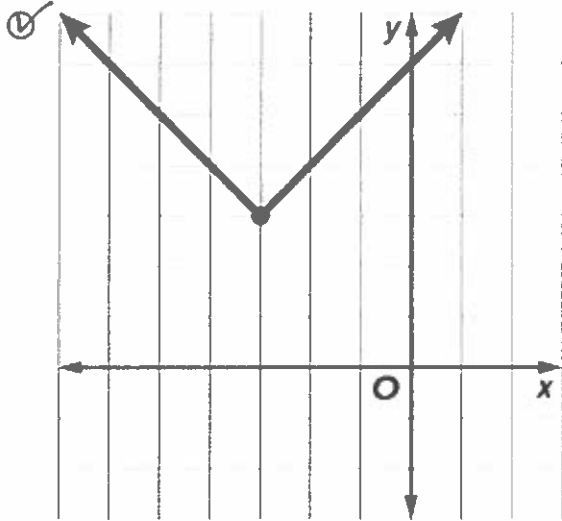
$h(x) = (-3x)$ _Reflected over y-axis & compressed hori._

Reflected across y-axis and compressed horizontally

Reflected across x-axis and stretched vertically

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16) Choose the correct graph for $k(x) = |x + 3| + 3$.

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