

31. Which of the following is a factored form of the polynomial

$$8a^6b + 8ab^6?$$

- A.  $8a^6b^6$
- B.  $8ab(a^5 + b^5)$
- C.  $8a^6b^6(a + b)$
- D.  $8a^7b^7$

32. At Cowmen's Dairy Land, ice cream cones cost \$0.75 and sundaes cost \$1.65. On Tuesday the receipts for a total of 152 cones and sundaes were \$150.00. Which of the systems of equations could be used to find the number of cones sold  $c$  and the number of sundaes sold  $s$ ?

- A. 
$$\begin{cases} c + s = 152 \\ 0.75c + 1.65s = 302 \end{cases}$$
- B. 
$$\begin{cases} c + s = 152 \\ 1.65c + 0.75s = 150 \end{cases}$$
- C. 
$$\begin{cases} c + s = 152 \\ 0.75c + 1.65s = 150 \end{cases}$$
- D. 
$$\begin{cases} c + s = 2 \\ 0.75c + 1.65s = 150 \end{cases}$$

33. Digital cameras at an electronics store range in price from \$179 to \$499. The table below shows how many digital cameras were sold during a certain period of time. Which inequality represents the possible total amount paid by customers for these digital cameras, not including tax, during the first quarter of the year?

Month	Number sold
January	48
February	53
March	41

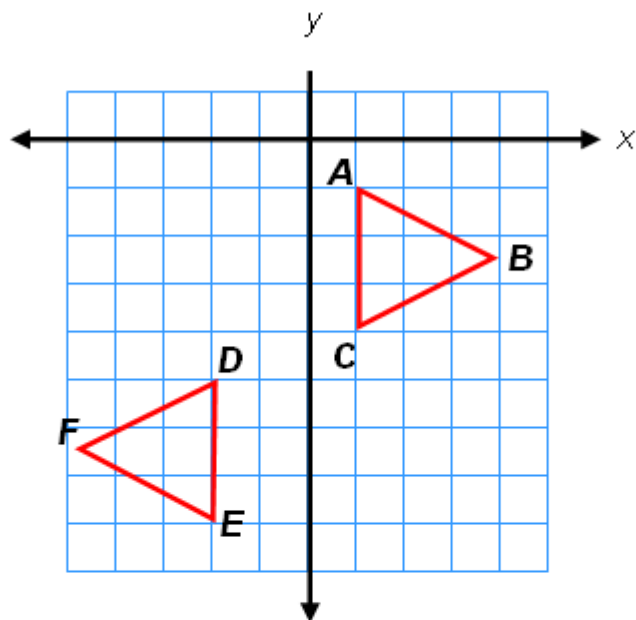
- A.  $\$0 \leq t \leq \$142$
- B.  $\$179 \leq t \leq \$499$
- C.  $\$8,472 \leq t \leq \$23,619$
- D.  $\$25,418 \leq t \leq \$70,858$

34. Line  $m$  has a slope of  $-3$ . It contains points  $A(1, 7)$  and  $B(4, y_1)$ . Find  $y_1$ .

- A.  $-\frac{1}{2}$
- B.  $-2$
- C.  $2$
- D.  $4$

35. Consider the unit grid shown below. What two transformations would you apply to triangle  $ABC$  to get triangle  $DEF$ ? Express these transformations with a single rule of the form  $T(x) = (\underline{\quad}, \underline{\quad})$ .

- A.  $(-x, y - 4)$
- B.  $(-x - 1, y + 4)$
- C.  $(-x + 1, y - 4)$
- D.  $(-x - 1, y - 4)$



36. It will take Derek 8 days to put up a fence. If Latoya could put up the same fence in 6 days, how long would it take them if they work together?

- A.  $3\frac{3}{7}$  days
- B.  $4\frac{4}{7}$  days
- C. 6 days
- D. 7 days

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For use with questions 37-39. The data set shows how much a company charges for a fishing boat rental for up to 12 hours. A deposit is included in each amount shown.

Time	1 h	2 h	3 h	4 h	5 h	6 h	7 h	8 h	9 h	10h	11 h	12 h
Cost	\$10	\$15	\$20	\$25	\$30	\$35	\$40	\$45	\$50	\$55	\$60	\$65

37. Which linear equation models the data set?

- A. The model is not linear.
- B.  $y = 5x + 10$
- C.  $y = 10x - 5$
- D.  $y = 5x + 5$

38. What is the hourly rental rate for a fishing boat?

- A. \$1/h
- B. \$3/h
- C. \$5/h
- D. \$10/h

39. Allison and Saul have \$100 to use to rent a fishing boat. For how many hours can they rent the boat?

- A. 10 hours
- B. 13 hours
- C. 17 hours
- D. 19 hours

40. Chris has tests grades of 88 and 94. The final test will count for 2 test grades. Which equation will tell Chris the lowest grade  $t$  that he can make on the final and still have a 91 average?

- A.  $\frac{(88+94+2t)}{4} \geq 91$
- B.  $\frac{(88+94+t)}{3} \geq 91$
- C.  $\frac{(88+94+t)}{3} \leq 91$
- D.  $\frac{(88+94+2t)}{3} \leq 91$

### Answer Key for problems 31-40

<b>31</b>	<b>B</b>
<b>32</b>	<b>C</b>
<b>33</b>	<b>D</b>
<b>34</b>	<b>B</b>
<b>35</b>	<b>D</b>
<b>36</b>	<b>A</b>
<b>37</b>	<b>D</b>
<b>38</b>	<b>C</b>
<b>39</b>	<b>D</b>
<b>40</b>	<b>A</b>