

1

The number 4567 is tripled. The ones digit (units digit) in the resulting number is
(A) 5 (B) 6 (C) 7 (D) 3 (E) 1

A	D	B	B	C	E	D	C	E	A
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2

A bag contains 15 balls. Exactly 3 of these balls are red. Alex reaches into the bag and randomly selects one of the balls. What is the probability that the ball that Alex selects is red?
(A) $\frac{1}{5}$ (B) $\frac{4}{5}$ (C) $\frac{1}{15}$ (D) $\frac{1}{4}$ (E) $\frac{14}{15}$

A	B	B	E	C	D	D	A	E	C
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3

How many integers between 1 and 60 contain the digit 3 at least once?
(A) 6 (B) 10 (C) 14 (D) 15 (E) 20

A	D	B	C	C	E	D	B	E	A
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4

The area of a rectangular shaped garden is 28 m^2 . It has a length of 7 m. Its perimeter, in metres, is
(A) 22 (B) 11 (C) 24 (D) 36 (E) 48

A	E	B	C	C	D	D	A	E	B
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5

Kalob's window measures $50 \text{ cm} \times 80 \text{ cm}$. Which of the following measurements would give an area that is exactly double the area of his window?
(A) $25 \text{ cm} \times 160 \text{ cm}$ (B) $40 \text{ cm} \times 100 \text{ cm}$ (C) $50 \text{ cm} \times 160 \text{ cm}$
(D) $100 \text{ cm} \times 160 \text{ cm}$ (E) $50 \text{ cm} \times 120 \text{ cm}$

A	A	B	D	C	C	D	E	E	B
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6

Michael picks three *different* digits from the set $\{1, 2, 3, 4, 5\}$ and forms a mixed number by placing the digits in the spaces of $\square \frac{\square}{\square}$. The fractional part of the mixed number must be less than 1. (For example, $4\frac{2}{3}$). What is the difference between the largest and smallest possible mixed number that can be formed?
(A) $4\frac{3}{5}$ (B) $4\frac{9}{20}$ (C) $4\frac{3}{10}$ (D) $4\frac{4}{15}$ (E) $4\frac{7}{20}$

A	E	B	A	C	D	D	C	E	B
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7

How many numbers from the set $\{-5, -4, -3, -2, -1, 0, 1, 2, 3\}$ satisfy the inequality $-3x^2 < -14$?
(A) 1 (B) 2 (C) 3 (D) 4 (E) 5

A	C	B	D	C	E	D	A	E	B
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8

Three playing cards are placed in a row. The club is to the right of the heart and the diamond. The 5 is to the left of the heart. The 8 is to the right of the 4. From left to right, the cards are
(A) 4 of hearts, 5 of diamonds, 8 of clubs (B) 5 of diamonds, 4 of hearts, 8 of clubs
(C) 8 of clubs, 4 of hearts, 5 of diamonds (D) 4 of diamonds, 5 of clubs, 8 of hearts
(E) 5 of hearts, 4 of diamonds, 8 of clubs

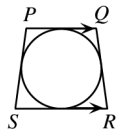
A	C	B	E	C	A	D	B	E	D
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9

A circle is inscribed in trapezoid $PQRS$.
If $PS = QR = 25$ cm, $PQ = 18$ cm and $SR = 32$ cm, what is the length of the diameter of the circle?

- (A) 14 (B) 25 (C) 24
(D) $\sqrt{544}$ (E) $\sqrt{674}$



10

Emily has created a jumping game using a straight row of floor tiles that she has numbered 1, 2, 3, 4, Starting on tile 2, she jumps along the row, landing on every second tile, and stops on the second last tile in the row. Starting from this tile, she turns and jumps back toward the start, this time landing on every third tile. She stops on tile 1. Finally, she turns again and jumps along the row, landing on every fifth tile. This time, she again stops on the second last tile. The number of tiles in the row could be

- (A) 39 (B) 40 (C) 47 (D) 49 (E) 53

A	E	B	D	C	C	D	A	E	B
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A	E	B	B	C	A	D	D	E	C
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