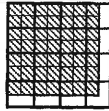


26. 9 tiles cover a 6×6 section, leaving a 1-unit wide uncovered area. Pat needs 7 more tiles to cover this 1-unit wide area.
A) 13 B) 14 C) 15 D) 16



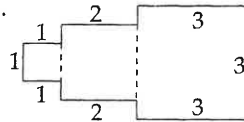
27. From 1 to 999 are 249 multiples of 4. Remove the 25 multiples from 500 to 599 and the 18 others that end in 52 or 56.
A) 206 B) 207 C) 208 D) 209



28. The ratio 3:5 is equal to $(10 \times 3):(10 \times 5) = 30:50$.
A) $\frac{1}{3}:\frac{1}{5}$ B) 13:15 C) 30:50 D) $(1+3):(1+5)$

29. My number could be 16 since the sum of 16's factors is $1+2+4+8+16=31$, which is less than twice 16.
A) 12 B) 16 C) 20 D) 24

30. Once around, we go up 3, so we must go down 3. We must go right $1+2+3$, and we must go left $3+2+1$. The total distance is $3+3+6+6=18$.
A) 18 B) 20 C) 21 D) 22



31. Choose any distance from Brad's to Caryn's house. Let's use 35 km, a number divisible by 5 and 7. It takes Brad $35 \div 5 = 7$ hrs. and $35 \div 7 = 5$ hrs. for the trips. His avg. speed is $(d \text{ km}) / (t \text{ hrs.}) = 70 / (5+7) = 35 / 6$.
A) $5\frac{5}{7}$ B) $5\frac{5}{6}$ C) 6 D) $6\frac{1}{6}$

32. Factoring: $(1 \times 2 \times 3 \times \dots \times 48) \times (49 \times 50 - 49) = (1 \times 2 \times 3 \times \dots \times 47 \times 48) \times 49^2$.
A) 49^2 B) 50^2 C) 49 D) 50

33. Player 1 plays 9 games, then leaves. Player 2 plays 8 other games, then leaves, player 3 plays 7 other games, then leaves, and so on. The total number of games is $9+8+7+6+5+4+3+2+1=45$.
A) 100 B) 90 C) 50 D) 45

34. Subtract 6 from each choice to find the number of cats with spots. We get 2, 3, 12, and 18. The number of cats without spots for each is 24, 23, 14, and 8. Since $3 \times 8 = 24 = 18+6$, it's choice D.
A) 8 B) 9 C) 18 D) 24



35. The decimal is 0.0185185.... An "8" appears in the 3rd, 6th, 9th, ..., 2010th decimal place. So a "5" is in the 2011th place.
A) 0 B) 1 C) 5 D) 8

26. D

27. A

28. C

29. B

30. A

31. B

32. A

33. D

34. D

35. C

Information & Solutions

2010-2011 Annual 6th Grade Contest

Tuesday, February 15 or 22, 2011

Contest Information

6

- Solutions** Turn the page for detailed contest solutions (written in the question boxes) and letter answers (written in the *Answer Column* to the right of each question).
- Scores** Please remember that *this is a contest, and not a test*—there is no "passing" or "failing" score. Few students score as high as 28 points (80% correct); students with half that, 14 points, *deserve commendation!*
- Answers and Rating Scales** Turn to page 152 for the letter answers to each question and the rating scale for this contest.

