Math 9 Accelerated - Exam Review: Chapter 3
Answer Section

MULTIPLE CHOICE

1. C
2. C
3. B
4. A
5. D
6. D
7. A
8. A
9. A
10. A
11. A
12. C
13. A
14. B
15. A
16. A
17. D
18. D
19. A
20. C

SHORT ANSWER

1. -4.1

2. B: $-\dfrac{9}{16}$, C: $-\dfrac{1}{16}$

3. a) $3.08 = 3\dfrac{2}{25}$

   b) $3\dfrac{1}{6} > 3.11$

4. -7.95

5. $-\dfrac{11}{10}$

6. $-6\dfrac{7}{20}$

7. -14.6

8. $11\frac{5}{6}$

9. Expressions i and iii have negative answers.
   i) $-6.4 - 24.5 = -30.9$
   iii) $-3.7 + (-32.4) = -36.1$

10. $\frac{73}{20}$

11. 336

12. $-12\frac{5}{6}$

13. $\frac{45}{28}$

14. $\frac{4}{5}$

15. i, ii, and iv

16. 6.1

17. $\frac{2}{9}$

18. $4\frac{2}{3}$

19. Divide 3.8 by 2.4.

20. $\frac{5}{9}$

21. $2\frac{3}{4}$

22. 3

PROBLEM

1. a) $-1\frac{2}{3}, 0.5, 1\frac{3}{4}, -\frac{5}{6}, -0.5, -2.1, 1.4, \frac{5}{6}$

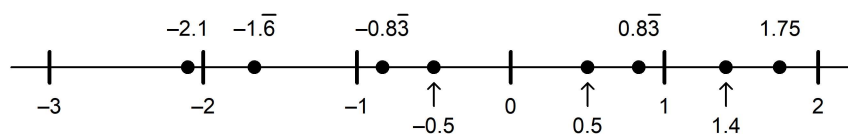   Write the fractions and mixed numbers as decimals.

    $-1\frac{2}{3} = -1.\overline{6}$

    $1\frac{3}{4} = 1.75$

    $-\frac{5}{6} = -0.8\overline{3}$

    $\frac{5}{6} = 0.8\overline{3}$

    Mark each number on a number line.

    b) The least number is: -2.1

    c) The greatest number is: $1\frac{3}{4}$

2. a) $45.25 + 18.25 + (-31.64) + (-15.48) = 16.38$
    b) Melissa has $16.38 left.
3. a) Expression ii has the least sum since all numbers in the expression are negative.
    b) The sum is -18.7.
4. a) $-\$1.27 \times 120 = -\$152.40$
        The shares decreased in value by $152.40.
    b) $\$1.43 \times 190 = \$271.70$
        The shares increased in value by $271.70.
    c) $-\$152.40 + \$271.70 = \$119.30$
        Overall, Karen gained $119.30.
5. a) $\square \div 1.45 = -0.3$

        $\square = 1.45 \times (-0.3)$

        $\square = -0.435$

    b) $\frac{7}{18} \div \square = -\frac{7}{12}$

        $\square = \frac{7}{18} \div \left(-\frac{7}{12}\right)$

        $\square = \frac{7}{18} \times \left(-\frac{12}{7}\right)$

        $\square = -\frac{2}{3}$

6. Temperature change:
   $32°C - 5°C = 27°C$
   Number of hours the temperature increased:
   $27°C \div 3.6°C/h = 7.5$ h
   So, it took 7.5 h to reach 32°C.

7. Error:
   In line 3, the student evaluated $1.7 \times (2.5 + 3.5) \times 1.3$ instead of $(1.7 \times 2.5) + (3.5 \times 1.3)$.
   Correction:
   $1.7 \times (4.6 - 2.1) + 3.5 \times 1.3$
   $= 1.7 \times 2.5 + 3.5 \times 1.3$
   $= 4.25 \times 4.55$
   $= 8.8$

8. $\left[1\frac{5}{7} \times \left(-3\frac{5}{6} \right) \right] \div \left[\left(-2\frac{1}{10} \right) \div 0\frac{7}{8} \right]$

   $= \left[\frac{12}{7} \times \left(-\frac{23}{6} \right) \right] \div \left[\left(-\frac{21}{10} \right) \div \frac{7}{8} \right]$

   $= \left[\frac{12}{7} \times \left(-\frac{23}{6} \right) \right] \div \left[\left(-\frac{21}{10} \right) \times \frac{8}{7} \right]$

   $= \left(-\frac{46}{7} \right) \div \left(-\frac{12}{5} \right)$

   $= \left(-\frac{46}{7} \right) \times \left(-\frac{5}{12} \right)$

   $= \frac{115}{42}$