Patterns and Algebra – Workbook 7, Part 2

Worksheet PA7-16

Page 77

1. a) $4s = t$ Tri. (t)

<table>
<thead>
<tr>
<th>s</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
</tbody>
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b) $6s = r$

<table>
<thead>
<tr>
<th>s</th>
<th>r</th>
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<tbody>
<tr>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
</tr>
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</table>

c) $8s = t$

<table>
<thead>
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<th>s</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>24</td>
</tr>
</tbody>
</table>

d) $4s = t$

<table>
<thead>
<tr>
<th>s</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>24</td>
</tr>
</tbody>
</table>

2. a) $t = s \times 4$

b) $t = s \times 5$

c) $t = s \times 2$

d) $t = s \times 6$

3. a) $Sq. (s)$ Rec. (r)

| 1   | 4   |
| 2   | 8   |
| 3   | 12  |

Worksheet PA7-17

Page 81

1. a) Multiply by 3; Divide by 3

b) Add 5; Subtract 5

c) Multiply by 2; Divide by 2

2. Switch left box rule with right box rule.

3. a) (3,5); (4,6); (5,7); (6,8)

b) (10,5); (8,4), (6,3), (4,2)

c) (5,10), (4,8), (3,6), (2,4)

Worksheet PA7-18

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1. a) $2 4 6$

b) $1 3 5$

c) $t = s \times 4$

d) $t = s \times 5$

e) $t = s \times 2$

g) $t = s \times 6$

2-5. Teacher to check.

Worksheet PA7-19

Page 84

1. a) 7
b) 17  
c) 11

2. a) Term | Term
1 | 1
2 | 3
3 | 5
4 | 7

b) Term | Term
1 | 2
2 | 4
3 | 6
4 | 8

c) Term | Term
1 | 4
2 | 7
3 | 10
4 | 13

3. a) (1,1), (2,3), (3,5), (4,7), (5,9)
b) (1,2), (2,4), (3,6), (4,8), (5,10)
c) (1,4), (2,7), (3,10), (4,13), (5,16)
d) (1,3), (2,7), (3,11), (4,15), (5,19)

4. a) A: 0, 4, 8, 12, 16  
B: 17, 11, 9, 4, 1  
C: 2, 3, 4, 3, 2  
D: 4, 7, 4, 7, 4, 7

b) i) C  
ii) A  
iii) D  
iv) B

5. a) A: (1,10), (2,9), (3,6), (4,9), (5,4), (6,3), 10, 9, 6, 9, 4, 3
B: (1,10), (2,9), (3,8), (4,7), (5,6), (6,5), 10, 9, 8, 7, 6, 5
C: (1,2), (2,1), (3,6), (4,5), (5,4), (6,3), 2, 1, 6, 5, 4, 3
D: (1,5), (2,6), (3,7), (4,8), (5,9), (6,10)

b) B

Worksheet PA7-20  
page 85

1. a) Teacher to check.  
b) i) No  
   (ii) Yes  
   (iii) Yes  
   (iv) No  
   (v) Yes  
   (vi) No

2-3. Teacher to check.

4. The line formed from connecting the points has a positive slope if the sequence is increasing, and a negative slope otherwise.

2. a) n | 2n + 3
1 | 5
2 | 7
3 | 9
4 | 11

b) n | 3n - 2
1 | 1
2 | 4
3 | 7
4 | 10
5 | 13

b) A: Output = (3 x Input) - 1  
B: Output = Input + 2  
C: Output = Input

2-3. Teacher to check.

4. a) 3 and ½ cents  
b) 2 cents  
c) The equation of the line is Cost = (2 x Length of Call) – ½. Therefore, to talk for 10 minutes you would have to pay

3. a) NOTE: Teacher
Patterns and Algebra – Workbook 7, Part 2 (Continued)

to check graphs.

<table>
<thead>
<tr>
<th>n</th>
<th>2n + 2</th>
</tr>
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<tbody>
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<td>6</td>
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<tr>
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<td>8</td>
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<tr>
<td>4</td>
<td>10</td>
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<tr>
<td>5</td>
<td>12</td>
</tr>
</tbody>
</table>

(1,4), (2,6), (3,8), (4,10), (5,12)

b) | n | 3n – 1 |
<table>
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</thead>
<tbody>
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<td>1</td>
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<tr>
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<td>5</td>
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<tr>
<td>3</td>
<td>8</td>
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<td>4</td>
<td>11</td>
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<tr>
<td>5</td>
<td>14</td>
</tr>
</tbody>
</table>

(1,2), (2,5), (3,8), (4,11), (5,14)

c) | n | 4n – 3 |
<table>
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<tbody>
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<tr>
<td>4</td>
<td>13</td>
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<tr>
<td>5</td>
<td>17</td>
</tr>
</tbody>
</table>

(1,1), (2,5), (3,9), (4,13), (5,17)