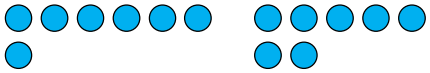
Y5 – Autumn – Block 3 – Step 5 – Prime numbers Answers

<table>
<tr><th>Question</th><th>Answer</th></tr>
<tr><td>1</td><td>a) No.
 
b) 1 and 7
c) It only has two factors, which are 1 and itself.</td></tr>
<tr><td>2</td><td>
<table>
<tr><th>Number</th><th>Factors</th><th>Is the number prime?</th></tr>
<tr><td>5</td><td>1 and 5</td><td>Yes</td></tr>
<tr><td>9</td><td>1, 3, 9</td><td>no</td></tr>
<tr><td>11</td><td>1, 11</td><td>yes</td></tr>
<tr><td>14</td><td>1, 2, 7, 14</td><td>no</td></tr>
<tr><td>15</td><td>1, 3, 5, 15</td><td>no</td></tr>
<tr><td>19</td><td>1, 19</td><td>yes</td></tr>
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</td></tr>
<tr><td>3</td><td>2, 3, 5, 7, 11, 13, 17, 19</td></tr>
<tr><td>4</td><td>No
It has more than two factors: 1, 5, 25</td></tr>
<tr><td>5</td><td>a) 17
b) 23</td></tr>
<tr><td>6</td><td>
<table>
<tr><td>51</td><td>52</td><td>53</td><td>54</td><td>55</td><td>56</td><td>57</td><td>58</td><td>59</td><td>60</td></tr>
<tr><td>61</td><td>62</td><td>63</td><td>64</td><td>65</td><td>66</td><td>67</td><td>68</td><td>69</td><td>70</td></tr>
<tr><td>71</td><td>72</td><td>73</td><td>74</td><td>75</td><td>76</td><td>77</td><td>78</td><td>79</td><td>80</td></tr>
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</td></tr>
<tr><td>7</td><td>126 has 2 as a factor because it is even.
175 has 5 as a factor because it ends in 5
2,378 has 2 as a factor because it is even.
777 has 7 as a factor because each digit is 7
381 has 3 as a factor because the digits sum to a multiple of 3
9,000 has 2 as a factor because it is even.

Children may have different reasons, e.g.
777 has 3 as a factor because the digits sum to a multiple of 3
9,000 has 3/5/9/10 as a factor.</td></tr>
<tr><td>8</td><td>Alex
2 is even and prime. It is the only even prime number.</td></tr>
<tr><td>9</td><td>2, 3, 4, 5, 6 or 3, 4, 5, 6, 7</td></tr>
<tr><td>10</td><td>23
This is the only possible answer.</td></tr>
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